



DACW03-86-D-0068
ORDER NO. 0003

3

US Army Corps
of Engineers
Little Rock District

AD-A212 151

ARCHEOLOGICAL SITE LOCATION AND EVALUATION

LAKE DARDANELLE AND OZARK LAKE
MCCLELLAN-KERR ARKANSAS RIVER
NAVIGATION SYSTEM
WEST-CENTRAL, ARKANSAS

DTIC
ELECTE
SEP 11 1989
S D

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited

BY

JOHN D. NORTHRIP AND W. J. BENNETT, JR.

ARCHEOLOGICAL ASSESSMENTS REPORT NO. 82

SUBMITTED TO

LITTLE ROCK DISTRICT, CORPS OF ENGINEERS

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Delivery Order #12	2. JOINT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Archeological Site Location and Evaluation in Lake Dardanelle and Ozark Lake, McClellan-Kerr Arkansas River Navigation System, West-Central Arkansas		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) John D. Northrip and W.J. Bennett, Jr.		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Archeological Assessments, Inc. P.O. Box 1631 Nashville, Arkansas 71852		8. CONTRACT OR GRANT NUMBER(s) DACW03-86-D-0068
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Engineer District, Little Rock (SWLPL-A) P.O. Box 867 Little Rock, Arkansas 72203		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Cultural Resource Management Operation and Maintenance CESWL-PL-A
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE 1988
		13. NUMBER OF PAGES 99
		15. SECURITY CLASS. (of this report) unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release with the provision that site location information is confidential and should be provided only to responsible agencies with a need to know.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
Archaic Dardanelle Mississippian Woodland Archeology Fluvial Land Forms Natural Levee Arkansas River Valley Geomorphology Ozark Corps of Engineers Illinois Bayou Tributary Alluvial Fan Cultural Resource Mgt. McClellan-Kerr Arkansas River Navigation System		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
<p>This volume contains the reports of two separate but related sets of investigations within the Arkansas River Valley of western Arkansas sponsored by the U. S. Army Engineer District, Little Rock. Part I details an intensive reconnaissance-level survey of specific geomorphological features in the Mulberry Creek-Frog Bayou area of the Ozark Reservoir intended to provide information about the pre-Euro-American use of this portion of the Arkansas River Valley. This effort was conducted by Archeological Assessments, Inc., in August and December 1987. The effort</p>		

20. involved a literature search, pedestrian survey of specific landforms, and recovery of soil core samples from selected landforms and archeological sites. Ten previously undocumented archeological sites were recorded, one previously recorded site was tested, and several previously recorded sites were visited to determine current conditions. Part II discusses investigations designed to determine the potential significance of four sites (3PP255, 3PP258, 3PP259, and 3PP262) in the Illinois Bayou area of Lake Dardanelle. The archeological record at 3PP255 was determined to be a sparse scatter of lithic debris restricted to the modern plow zone and was not thought to be eligible for nomination to the National Register of Historic Places. The archeological record at sites 3PP258, 3PP259, and 3PP262 while sparse, was judged to contain buried deposits related to the occupation of the area during the Woodland and, perhaps, early Mississippian period. Activities associated with these occupations are thought to be centered upon the gathering and possible processing of plant materials. These sites were judged eligible for nomination to the National Register of Historic Places.

ARCHEOLOGICAL ASSESSMENTS REPORT No. 82
Archeological Site Location and Evaluation
in
Lake Dardanelle and Ozark Lake
McClellan-Kerr Arkansas River Navigation System
West-Central, Arkansas

by
John D. Northrip
and
W. J. Bennett, Jr.

Report
Submitted
to the
U. S. Army Engineer District, Little Rock

Dist.A..No on site information in this
report.

9-11-89 hp
Per Bob Dunn Army Engr. Little Rock

Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By <i>per call</i>	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

ABSTRACT

This volume contains the reports of two separate but related sets of investigations within the Arkansas River Valley of western Arkansas sponsored by the U. S. Army Engineer District, Little Rock. Part I details an intensive reconnaissance-level survey of specific geomorphological features in the Mulberry Creek-Frog Bayou area of the Ozark Reservoir intended to provide information about the pre-Euro-American use of this portion of the Arkansas River Valley. This effort was conducted by Archeological Assessments, Inc., in August and December 1987. The effort involved a literature search, pedestrian survey of specific landforms, and recovery of soil core samples from selected landforms and archeological sites. Ten previously undocumented archeological sites were recorded, one previously recorded site was tested, and several previously recorded sites were visited to determine current conditions. Part II discusses investigations designed to determine the potential significance of four sites (3PP255, 3PP258, 3PP259, and 3PP262) in the Illinois Bayou area of Lake Dardanelle. The archeological record at 3PP255 was determined to be a sparse scatter of lithic debris restricted to the modern plow zone and was not thought to be eligible for nomination to the National Register of Historic Places. The archeological record at sites 3PP258, 3PP259, and 3PP262 while sparse, was judged to contain buried deposits related to the occupation of the area during the Woodland and, perhaps, early Mississippian period. Activities associated with these occupations are thought to be centered upon the gathering and possible processing of plant materials. These sites were judged eligible for nomination to the National Register of Historic Places.

TABLE OF CONTENTS

	Page
Abstract	i
Table of Contents	ii
List of Figures	iv
List of Tables	v
General Introduction	vi

PART I

SITE LOCATION AND EVALUATION, OZARK LAKE, ARKANSAS

Introduction	1 - 4
Project Authorization	1
Project Location	1
Goals	1
Summary of Investigations	5 - 8
Background and Literature Search	5
Fieldwork	5
Artifact Analysis	8
Previous Investigations	9 - 10
Previously Recorded Sites	11 - 27
Testing 3FR157	11
3FR001	15
3FR023	17
3FR018	20
3CW646 and 3CW648	20
3CW31, 3CW13, 3CW14, 3CW61, 3CW58, 3CW59, 3CW32	21
3CW26, 3CW643, and 3CW54	26
Previously Unrecorded Sites	28 - 49
3CW693	28
3CW694	30
3CW695	34
3CW696	36
3CW697	38
3CW698	40
3CW699	42
3CW700 and 3CW701	44
3CW702	46
Interpretation and Recommendations	50 - 54

PART II

ARCHEOLOGICAL INVESTIGATIONS IN THE ILLINOIS BAYOU AREA, LAKE DARDANELLE, ARKANSAS

Introduction	55 - 58
Project Authorization	55
Project Area Location	55
Project Goals and Orientation	55
Summary of Investigations	59 - 60
Field Investigations	59
Laboratory Analyses	59
Archeological Context	61 - 66
Previous Archeological Investigations	61
The Regional Context	62
The Illinois Bayou Area	63
Context of Significance	65
Site Descriptions	67 - 94
Site 3PP255	67
Original Observations	
Field Strategy and Techniques	
Site Stratigraphy	
Recovered Materials	
Summary	
Site 3PP258	72
Original Observations	
Field Strategy and Techniques	
Site Stratigraphy	
Recovered Materials	
Summary	
Site 3PP259	78
Original Observations	
Field Strategy and Techniques	
Site Stratigraphy	
Recovered Materials	
Summary	
Site 3PP262	85
Original Observations	
Field Strategy and Techniques	
Site Stratigraphy	
Recovered Materials	
Summary	
Summary and Conclusions	95 - 96
References Cited	97 - 99

LIST OF FIGURES

	Page
Figure 1. General Study Area	2
Figure 2. General Project Area	3
Figure 3. General Conditions in Study Area	4
Figure 4. Areas Covered by Pedestrian Survey	6
Figure 5. Locations of Soil Cores	7
Figure 6. Sketch Map of Sites 3FR157 and 3FR3	12
Figure 7. Site 3FR157. View to the west	13
Figure 8. Site 3FR157. North Edge of Cultivated Area	13
Figure 9. Site 3FR1, General Site Area	15
Figure 10. Site 3FR1, Erosion at South End of Landform	16
Figure 11. Site 3FR1, Cutbank Erosion on Tributary to Mulberry Creek, north side of 3FR1	16
Figure 12. Site 3FR23, Active Erosion Along Main Channel of the Arkansas River. View to the northwest	17
Figure 13. Site 3FR23, Cutbank Profile	18
Figure 14. Site 3CW14, Soil Core No. 3	25
Figure 15. Site 3CW61, Soil Core No. 4	25
Figure 16. Site 3CW32, Soil Core No. 5	27
Figure 17. Sketch Map of Site 3CW693	28
Figure 18. Site 3CW693	29
Figure 19. Sketch Map of 3CW694	30
Figure 20. Site 3CW694	31
Figure 21. Site 3CW694	31
Figure 22. Site 3CW694, Soil Core No. 2	32
Figure 23. Sketch Map of 3CW695	34
Figure 24. Sketch Map of 3CW696	36
Figure 25. Sketch Map of 3CW697	38
Figure 26. Sketch Map of 3CW698	40
Figure 27. Sketch Map of 3CW699	42
Figure 28. Sketch Map of 3CW700	44
Figure 29. Sketch Map of 3CW701	44
Figure 30. Sketch Map of 3CW702	46
Figure 31. Site 3CW702, Soil Core No. 9	47
Figure 32. Sites with Bulverde Projectile Points	51
Figure 33. Sites with Shell-Tempered Pottery and Arrow Points	52
Figure 34. General Vicinity Map	56
Figure 35. Location of Landforms and Sites Tested on Illinois Bayou	57
Figure 36. Flake Size Chart	60
Figure 37. Site 3PP255. View to the west	67
Figure 38. Sketch Map of 3PP255	68
Figure 39. Site 3PP255, Core No. 23 Profile	69
Figure 40. Site 3PP258. View to the southeast	72
Figure 41. Sketch Map of 3PP258	73
Figure 42. 3PP258 Test Unit Soil Profiles	74
Figure 43. Site 3PP259 near Shovel Test 1	78
Figure 44. Sketch Map of 3PP259	79
Figure 45. Site 3PP259, Core No. 1 Profile	81
Figure 46. Site 3PP262. View to the north	85
Figure 47. Sketch Map of 3PP262	86
Figure 48. 3PP262, Core No. 1 Profile	88

LIST OF TABLES

	Page
Table 1. Spatial Distribution of Chronological Markers in the Study Area.	53
Table 2. Illinois Bayou Sites as Described in Greengo (1957)	64
Table 3. Recovered Materials from 3PP255	70
Table 4. Recovered Materials from 3PP258	75
Table 5. 3PP259: Soil Chemistry and Texture	80
Table 6. Recovered Materials from 3PP259	83
Table 7. 3PP262: Soil Chemistry and Texture	87
Table 8. Recovered Materials from 3PP262	89

GENERAL INTRODUCTION

During the late summer of 1985 an extensive reconnaissance-level site location effort was sponsored by the U.S. Army Engineer District, Little Rock (USAED, LR) within the Ozark Lake and Lake Dardanelle portions of the McClellan-Kerr Arkansas River Navigation System (Bennett et al. 1986). This effort was undertaken by Archeological Assessments, Inc., Nashville, Arkansas, using pedestrian survey tactics guided by a geomorphological analysis of this portion of the Arkansas River provided by Dr. Lawson M. Smith, U.S. Army Engineers, Waterways Experiment Station, Vicksburg, Mississippi (Smith 1986). This effort examined intensively all fee-owned lands in Ozark Lake (4,290 acres) as well as all public use areas and selected portions of the shoreline within Lake Dardanelle (5,797 acres). Ninety-three sites were examined.

Prior to this project archeological investigations had been limited to the pre-inundation studies of the area (Greengo 1957; Caldwell 1958; Hoffman 1977a, 1977b, 1977c; Bond 1977) and a number of small scale project specific surveys conducted primarily in support of energy production and delivery projects.

The results of this site location effort demonstrated that numerous, uninvestigated archeological sites existed within both Ozark Lake and Lake Dardanelle. Many of these sites are undergoing impacts related directly and indirectly to the multiple-uses of the McClellan-Kerr Arkansas River Navigation System. Only a handful of the more than 300 recorded sites have been formally evaluated to determine their potential for inclusion on the National Register of Historic Places. Further, it was possible to identify a number of specific landscapes on which and within which there was a high likelihood for the presence of potentially significant cultural resources which remain unrecorded.

As a follow-up to this effort USAED,LR decided to conduct further, but more limited, investigations within both Lake Dardanelle and Ozark Lake in the late summer of 1987. These investigations included the examination of a particular location within Ozark Lake on easement lands between Frog Bayou and the Mulberry River. The goal of this work was to investigate possible correlations between the archeological record and particular landforms created by the action of the Arkansas River. The results of these investigations are reported in Part I of this volume. The second set of investigations was focused on four sites within the Illinois Bayou area of Lake Dardanelle. These sites were chosen because they formed a cluster of sites, both geographically (within and adjacent to a large alluvial fan) and chronologically (Woodland and Mississippian), each with the possible presence of intact deposits. The results of this site evaluation effort are reported in Part II of this volume.

PART I
SITE LOCATION AND EVALUATION
OZARK LAKE, ARKANSAS

by
John D. Northrip

INTRODUCTION

Project Authorization

Under the authority of and in compliance with the National Historic Preservation Act of 1980 (Public Law 96-515) and other authorities, the U.S. Army Engineer District, Little Rock (USAED,LR) contracted with Archeological Assessments, Inc. (AAI), Nashville, Arkansas, for the performance of a reconnaissance-level survey of specific geomorphic landforms in less-than-fee lands within Ozark Lake, Arkansas. Work was authorized by Contract No. DACW03-86-D-0068, Order No. 12.

Project Location

In a discussion of existing prehistoric landforms within Ozark Lake, Smith states:

The most extensive area consists of the area north of the Arkansas River in the floodplain from the mouth of Frog Bayou east (down river) to the mouth of Mulberry River. Broad areas of natural levees adjacent to the modern Arkansas River, former Arkansas River banks, and a large abandoned Arkansas River channel appear to be areas of high probability of site occurrence in this portion of the Ozark Lake area. (Smith 1986)

The investigations focused on these geomorphic features and a similar area between Mulberry River and Bectum Hill (Figures 1 and 2) during the pedestrian survey and subsequent soil core recovery. Current use of the study area is agricultural, predominantly row crops (soybeans) and winter wheat (Figure 3). Low areas of standing water are bordered by mixed hardwoods.

Goals

Archeological Assessments' 1986 cultural resource survey of Ozark and Dardanelle reservoirs was confined to U.S. Army Corps of Engineers fee lands. It was felt that an investigation of the landforms present within the study area, but located on less-than-fee lands, would provide information useful to those concerned with use and management policy for Ozark Lake. The study would also add to a better understanding of human use of the prehistoric Arkansas River system.

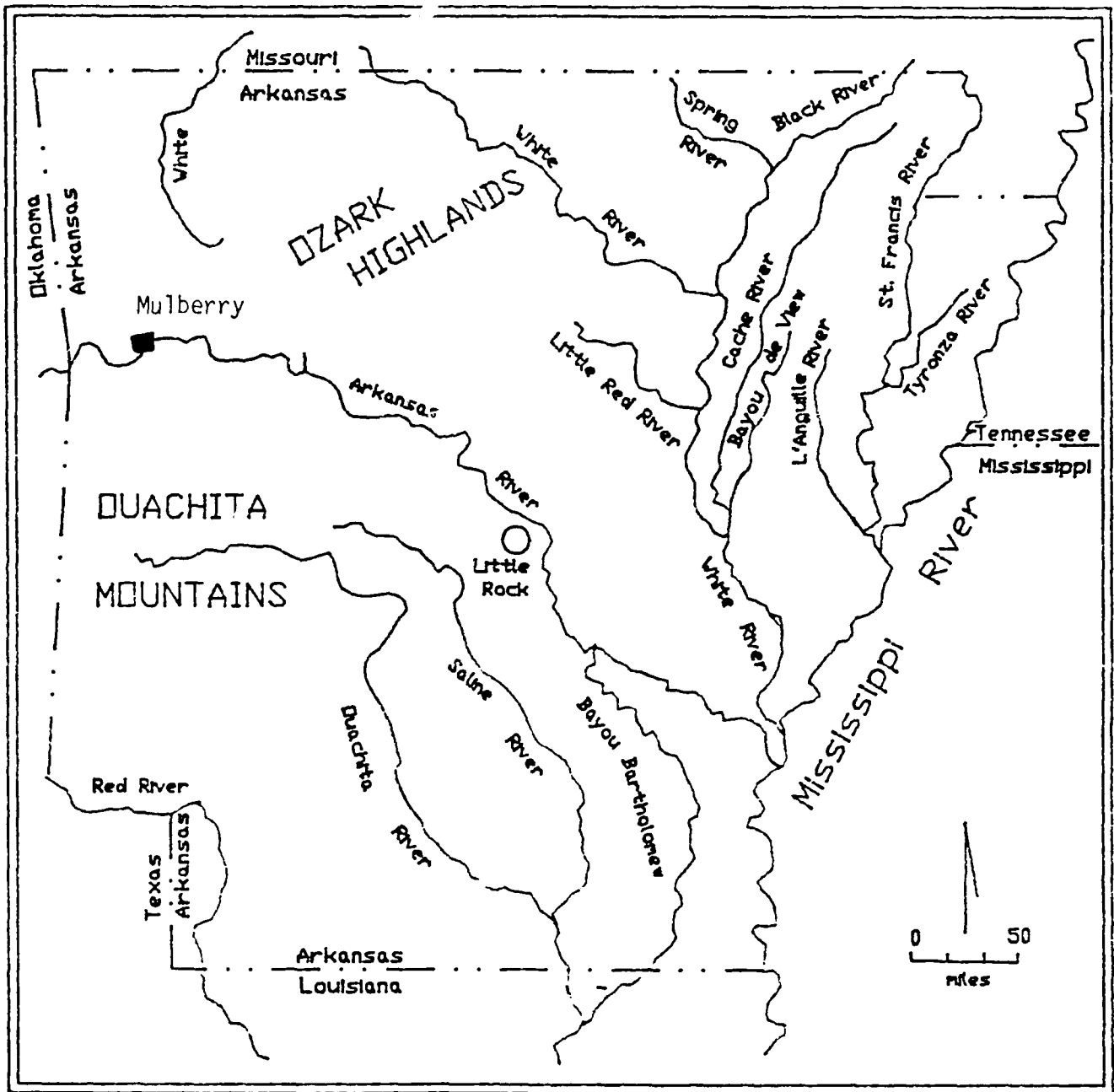


Figure 1. General Study Area

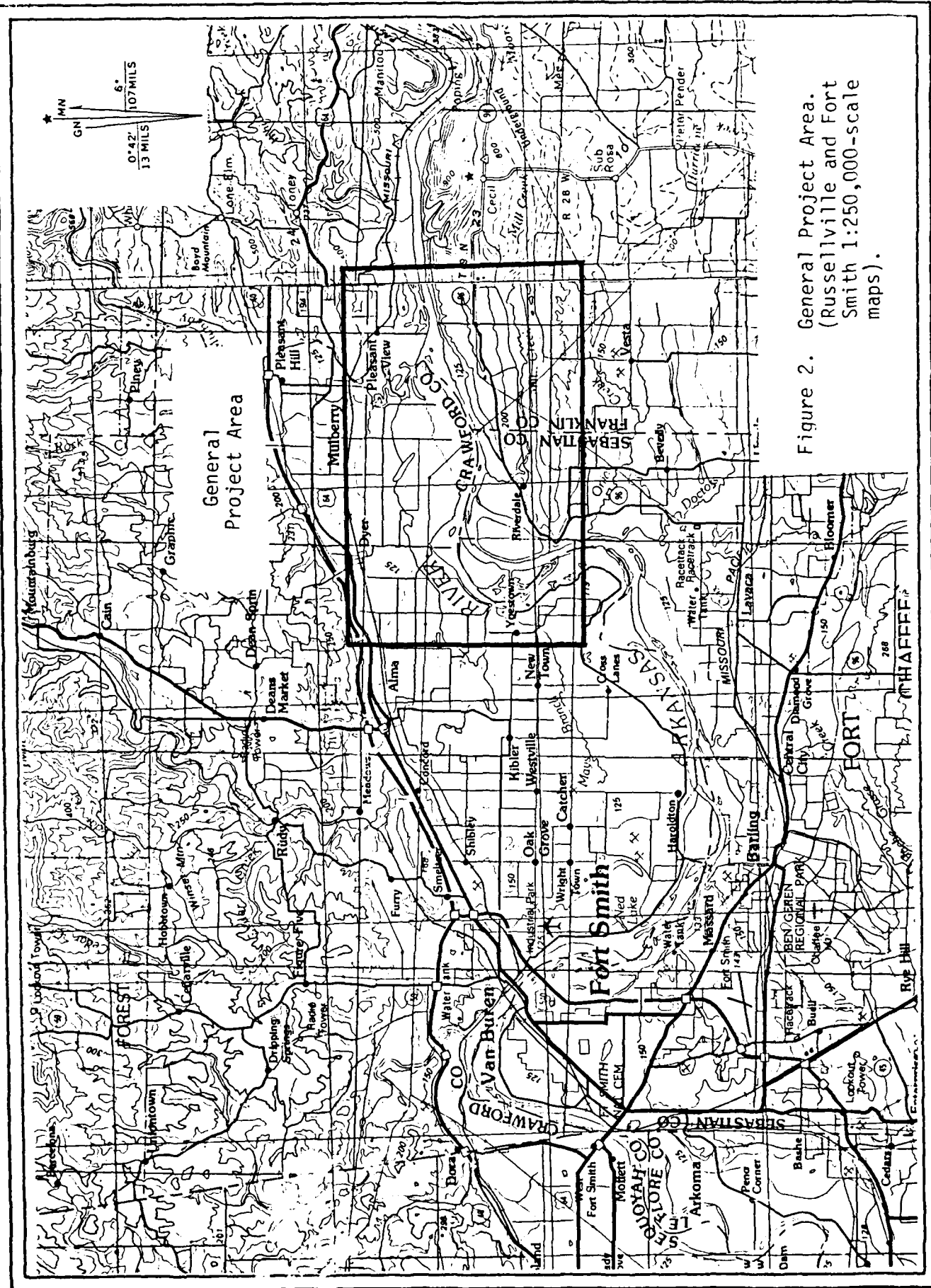


Figure 2. General Project Area.
(Russellville and Fort
Smith 1:250,000-scale
maps).

The goals of this effort were to provide additional site information through pedestrian surface survey and soil core sampling and to integrate information developed by previous archeological investigations into a more comprehensive statement of human use of these sequential alluvial deposits. Three main questions directed the effort:

- 1) What is the relationship of surface scatter distribution to landform composition?
- 2) What temporal inferences can be made from the surface scatter distribution?
- 3) What is the potential for buried archeological sites in the study area?

It was thought that by addressing these questions it would be possible to develop an appropriate assessment of the cultural resources within the study area as well as possible impacts to them. In this way suggestions could be formulated for changes, if any, in present management strategies and activities.



Figure 3. General Conditions in Study Area

SUMMARY OF INVESTIGATIONS

Background and Literature Search

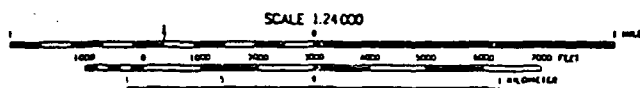
This effort began with a review of the Arkansas Archeological Survey site records and published accounts of previous archeological investigations in the study area. Robert Abbott of Archeological Assessments obtained copies of the state site forms for previously recorded archeological sites in the study area during a review of the files at the Office of the State Archeologist. A literature review provided information generated by previous archeological investigations. This data was synthesized with geomorphologically annotated USGS maps (Smith 1986) of the study area to direct the field crew to landforms of particular interest to the effort.

Fieldwork

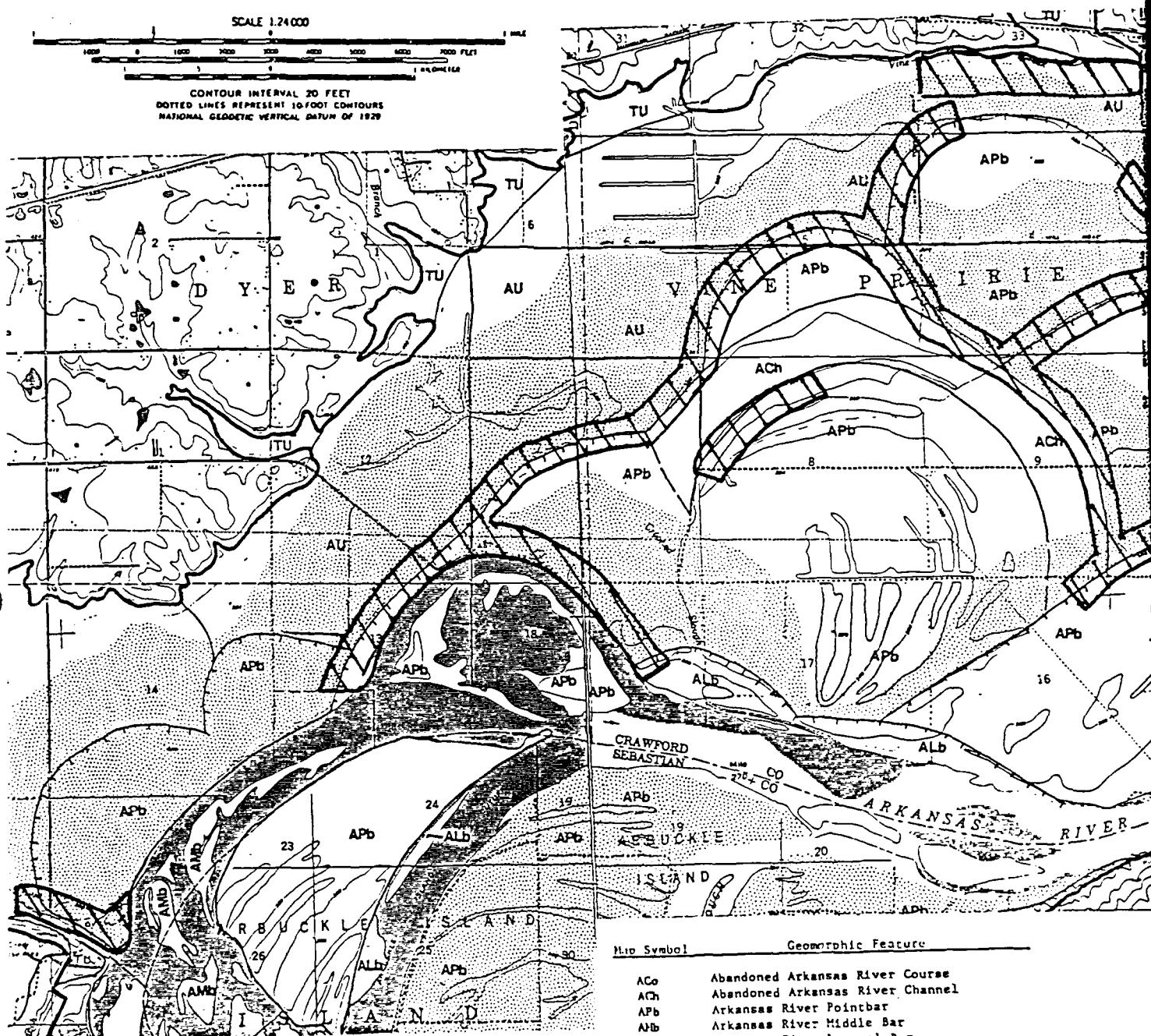
Field investigations in the study area were conducted by a team directed by W. J. Bennett, Jr., consisting of John Northrip, Robert O. Abbott, and John D. Northcutt. Abbott and Northrip conducted the survey of specific geomorphic features August 10 through 14, 1987; Northcutt, Northrip, and Abbott tested 3FR157 on August 22 and 23, 1987; and on December 1 through 3, 1987, Abbott and Northrip returned to the area for additional survey work and collection of soil core samples. Though access to the targeted landforms in August was limited by dense soybeans (see Figures 2 and 3), most of the areas not inspected during August were open in December, when winter wheat and muddy fields were the only inhibiting factors.

It was hoped that a pedestrian survey would allow inspection of all the landforms of interest to the study during the initial visit in August. However, crop and surface conditions (tall, dense soybeans; desiccated, clayey surface soils) made survey by standard shovel test and transect interval impossible, and only areas with crops thin enough to allow physical passage and to provide adequate surface visibility were available for inspection. Fortunately, a high percentage of those geomorphic features of interest to the study (abandoned channel cutbanks, natural levee crests and slopes, point bar ridges) fell at the edge of fields and provided sufficient visibility for surface reconnaissance (Figure 4). Transects were controlled more by crop row patterns than by arbitrary interval but remained within 50m of each other, with the width of area surveyed along these linear geomorphic features seldom less than 200m. Areas inspected during December had been harvested and tilled, and transects were run parallel to the landforms at 50m intervals.

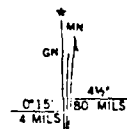
Soil cores were recovered at selected sites throughout the study area (Figure 5) with a Bull coring device, mounted on the bed of a 1979 GMC half-ton 4-wheel-drive truck. Four-foot lengths of 1.5-inch 2,000-psi PVC were used for core storage and transport to Archeological Assessments' lab facilities at Nashville.



CONTOUR INTERVAL 20 FEET
 DOTTED LINES REPRESENT 10-FOOT CONTOURS
 NATIONAL GEODETIC VERTICAL DATUM OF 1929



Map Symbol	Geomorphic Feature
ACo	Abandoned Arkansas River Course
ACH	Abandoned Arkansas River Channel
APb	Arkansas River Pointbar
AMB	Arkansas River Middle Bar
ALb	Arkansas River Lateral Bar
AU	Arkansas River Undifferentiated Floodplain
AT	Arkansas River Terrace
ARK	Arkansas River Natural Levee
TCO	Abandoned Tributary Course
TCh	Abandoned Tributary Channel
TP	Tributary Pointbar
TU	Undifferentiated Tributary Floodplain
TF	Tributary Alluvial Fan
TT	Tributary Terrace
US	Upland Slope
---	Study Area Boundary
---	Former Arkansas River Bank



UTM GRID AND 1981 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET

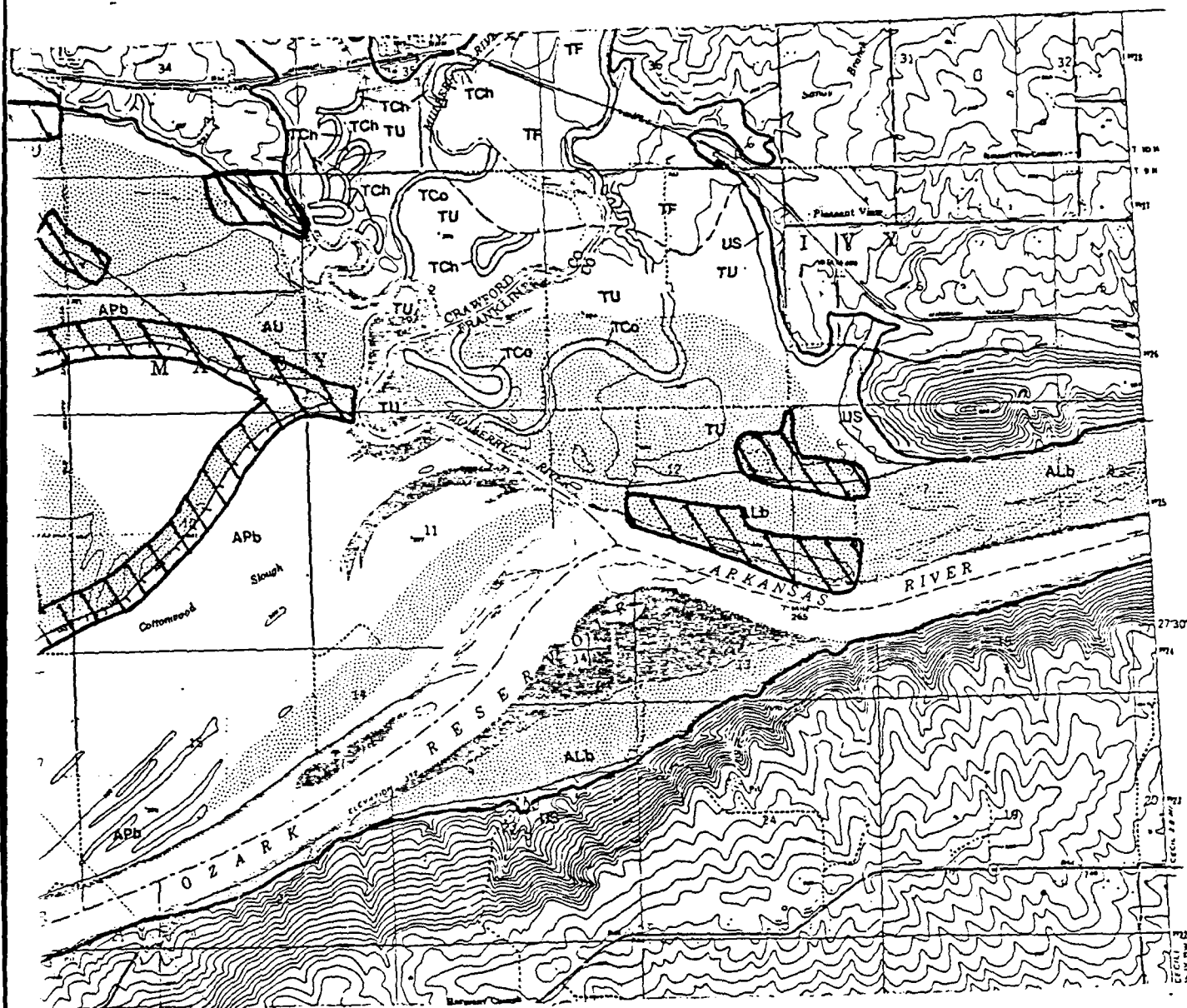


Figure 4. Areas Covered by Pedology Survey.

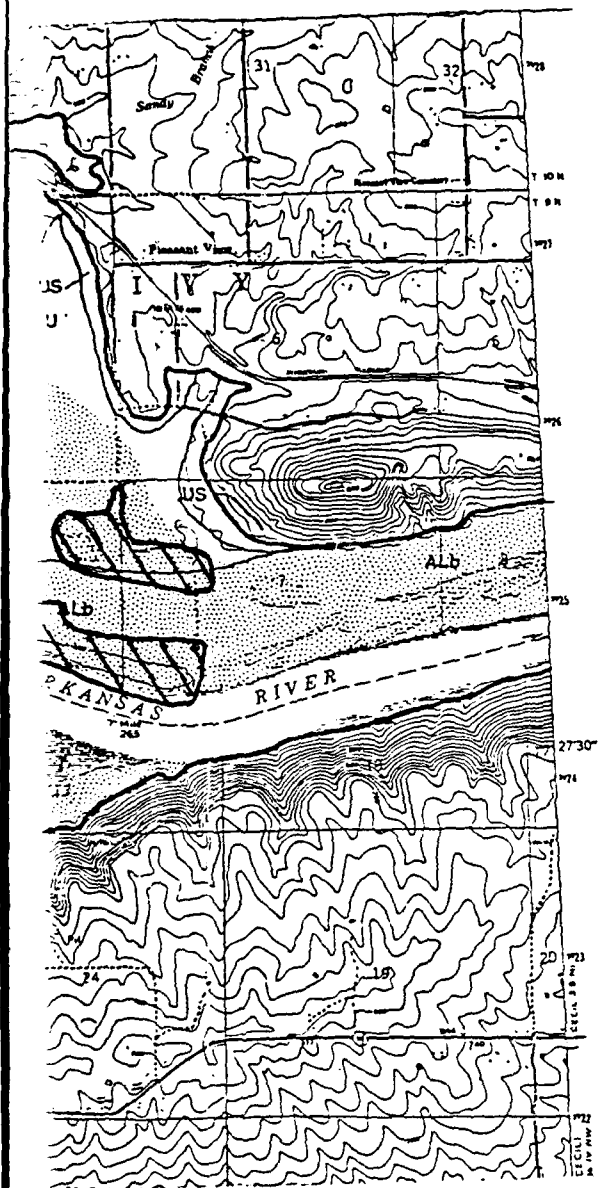
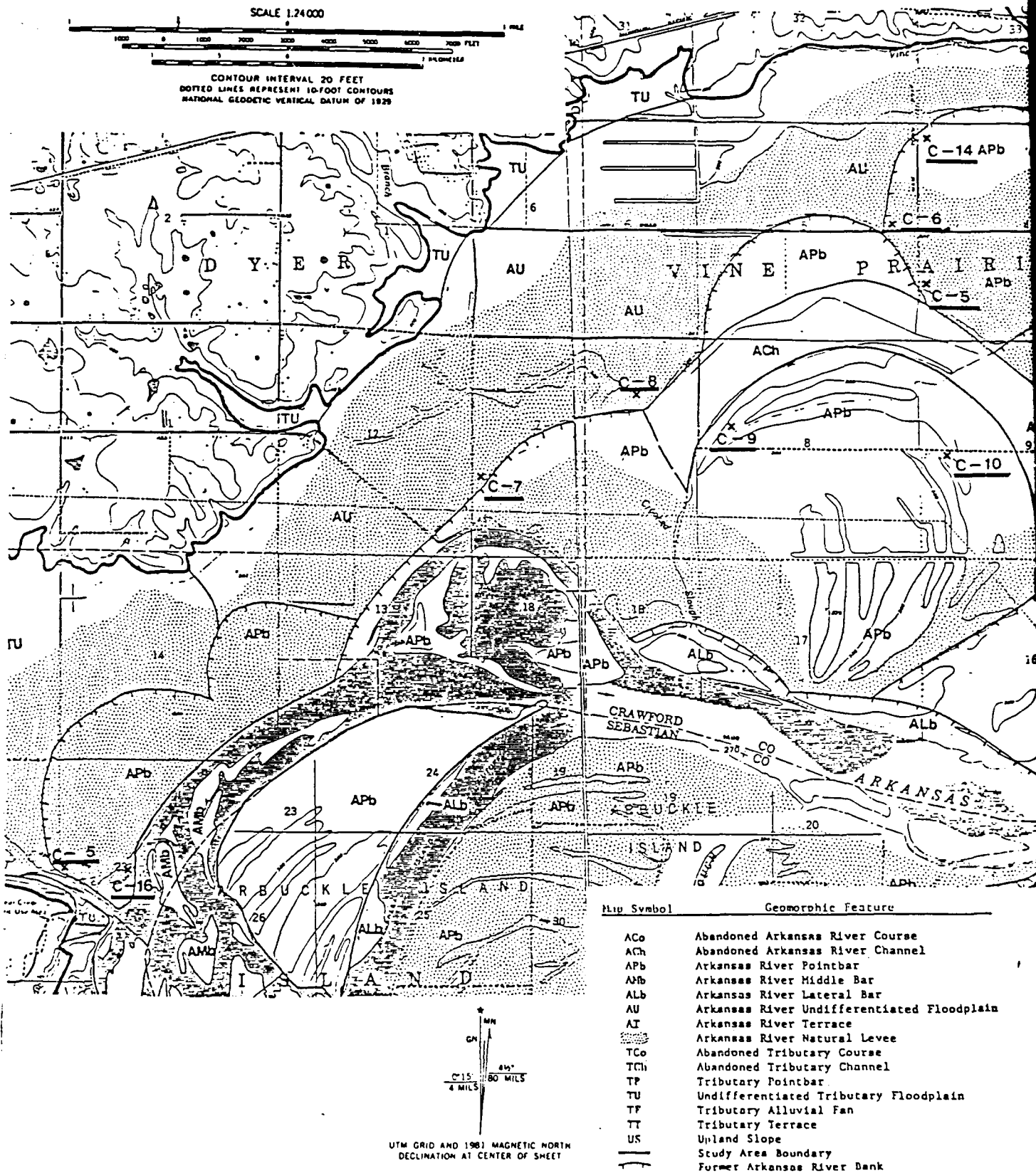


Figure 4. Areas Covered by Pedestrian Survey.



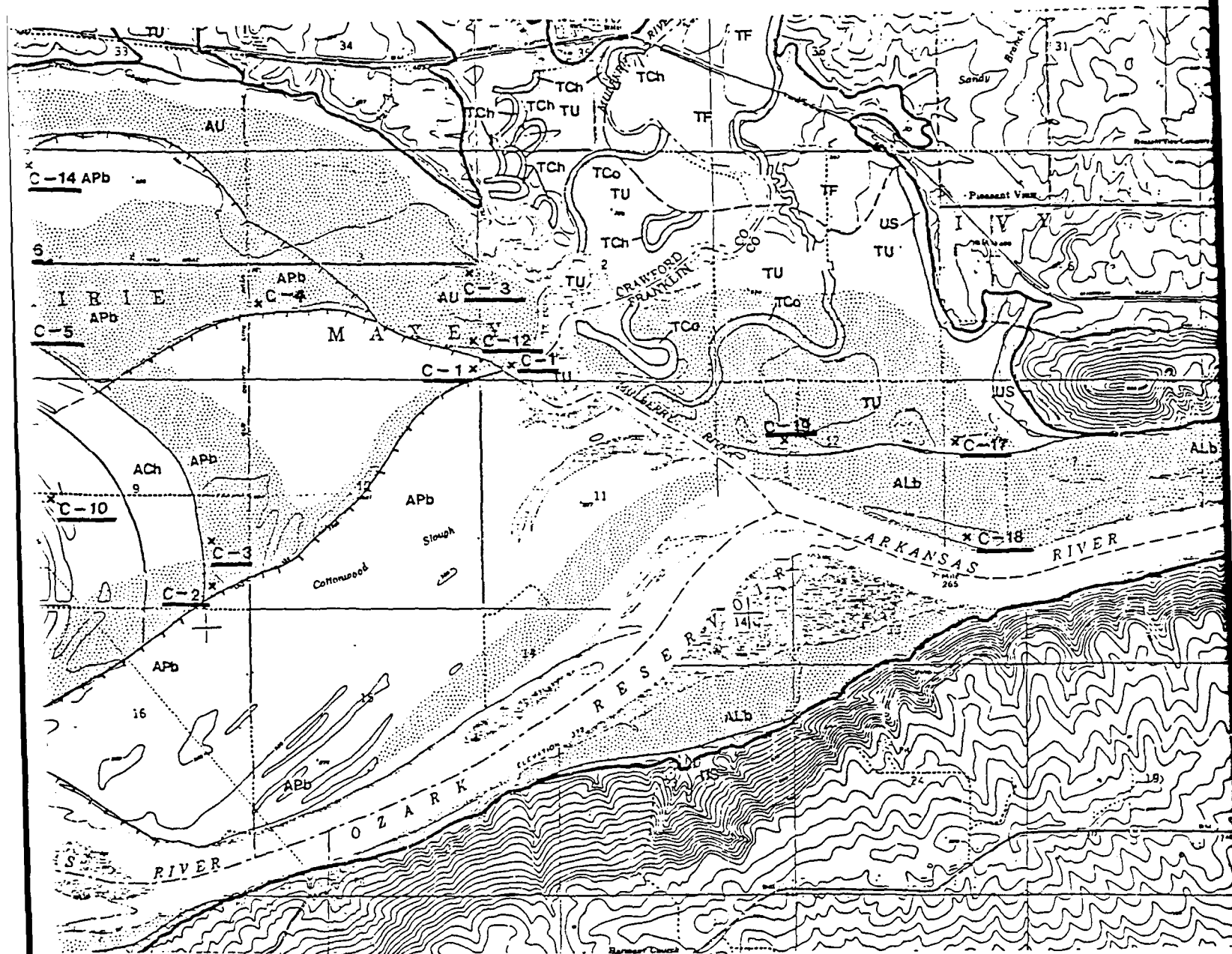


Figure 5. Location of Soil Cores.

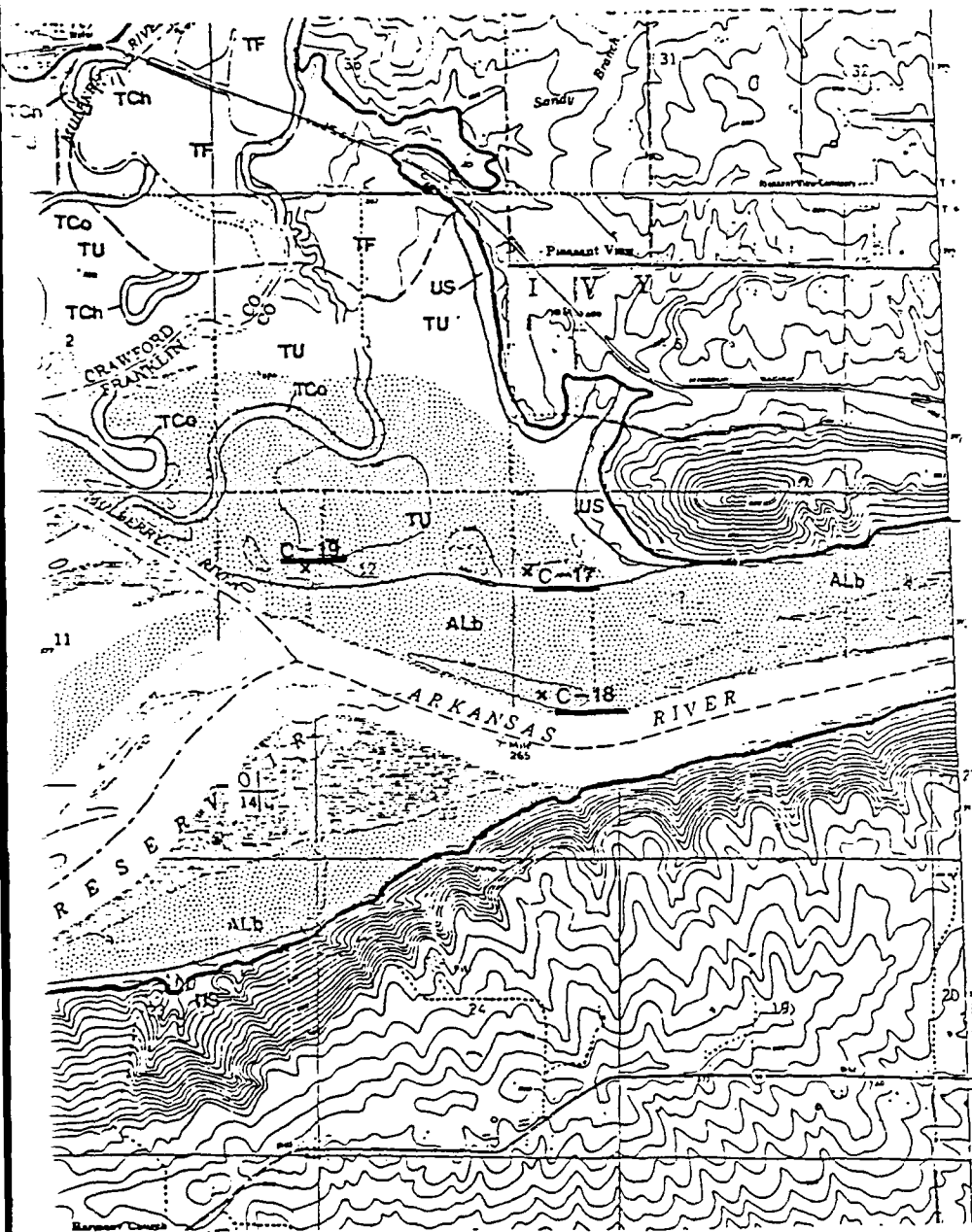


Figure 5. Location of Soil Cores.

During February 1988, several of these soil cores were observed and described by Lawson Smith and W. J. Bennett, Jr., and this information has been included in the discussion of sites from which they were recovered.

Artifact Analysis

All artifacts collected during the August fieldwork were cleaned and described by Christina Cojeen of Norman, Oklahoma. The artifacts were initially grouped into two categories: historic and prehistoric. Prehistoric lithic artifacts were subdivided into tools and flakes. Tools were lithic items which can be recognized morphologically as tools (e.g., dart points) or which show evidence of attempts to shape them into tools (e.g., cores) or which show evidence of use as a tool (e.g., edge damage).

Each flake was described according to size, presence or absence of cortex (a = absent; p = present), type of cortex (ps = stream-rolled; pq or pw = weathered, outcrop, or quarry), presence or absence of platform, type of platform (pf = faceted; pw = worn or rounded), and evidence of post-detachment modification. Lithic material types were abbreviated as follows: cht = chert, c/n = chert/novaculite, nov = novaculite, qtz = quartzite, qtz/sst = quartzite/siltstone, and und = unidentified).

Historic period artifacts were identified by raw material class (ceramic, glass, metal) and described in an attempt to establish a chronological range for the identifiable historic artifacts.

The recovered artifacts have been placed with the University of Arkansas Museum for curation.

PREVIOUS INVESTIGATIONS

In 1967, 59 sites were recorded and/or surface collected during a survey (Hoffman 1977b:6) of Ozark Reservoir that included the upper end of Dardanelle Reservoir. Besides providing brief site and material culture descriptions, Hoffman (1977b) reviewed previous work and culture complexes in the Ozark Lake area. He addressed the distribution of Webber's Falls siltstone (then thought to be argillite) in the survey area, and he also compared frequencies of hunting tools (projectile points) and plant processing tools (spades and manos) at upland and lowland sites. The Gober Complex was defined for Early Ceramic occupations and the McClure complex for the Late Ceramic. Archaic 3 (Late Archaic) components were inferred for 39 sites (Hoffman 1977b: 33); definable earlier components were absent.

In 1967, controlled surface collection was done to delineate functional or temporal differences within each of five sites (Hoffman 1977c). At the Spinach Patch site (3FR001), a dark midden area surrounding a lighter area could be defined on the cultivated surface. Material culture and human bone from 10-meter-square collection areas supported the identification of the lighter area as a burial area (possibly a mound levelled by plowing). A garden area was defined on the predominance of argillite tools and debris.

Poor visibility hampered surface collection at the Wheelbarrow (3FR018) and the River Bank (3FR023) sites. Thus, only an estimation of the relative concentration of material across each site was possible. In the spring of 1968, aerial photography was done for several sites (Hoffman 1977a; Printup 1977). Dark colored middens were visible at Spinach Patch and River Bank.

At all stages of investigation, the Spinach Patch site was considered the most significant site in the project area, and in the summer and fall of 1968, the site was tested. Bond (1977:81-120) described Spinach Patch as an Early Ceramic site with a large rectangular midden area. A rectangular plaza, two circular burial mounds (one of which contained three burials), an arc of post holes, an ash concentration, and a rock concentration are defined within the midden. Most material culture occurs within the 10 and 20 cm plowzone, and the site has been collected and "potted" for many years by local collectors. Despite these factors, Bond concluded that the assemblage (including Gary, Scallorn, and expanding-stemmed large points, clay-tempered pottery, and argillite spades or hoes) represented a single cultural component. The site was compared to published descriptions of Fourche Maline Focus sites in eastern Oklahoma.

The River Bank site (Bond 1977:120-137), excavated at the same time as Spinach Patch, had also been plowed and collected for years. Here a dark midden surrounded a light colored area interpreted as a possible mound. This was not demonstrated by testing, although a distinctive soil profile

was found in the lighter area. The artifact inventory included Gary and Scallorn points, an argillite spade, and clay-tempered pottery. As with Spinach Patch, the River Bank site was considered to be an Early Ceramic, Gober Complex manifestation.

As part of a more comprehensive environmental impact assessment of alternative flood control measures in the vicinity of Big Mulberry Creek, a general reconnaissance of that area was undertaken in 1972. Performed by John House (1972), this effort entailed a records check of sites in the vicinity and six days of site location activities. A total of 23 new sites were recorded. While some evidence of Archaic period occupation was noted, the sites in the Mulberry River Basin seemed to cluster in the Late Prehistoric and Early Historic periods.

In 1985 Archeological Assessments, Inc., conducted an extensive reconnaissance-level survey designed to locate and describe cultural resources within selected areas of Lake Dardanelle and Ozark Lake, for the U.S. Army Corps of Engineers, Little Rock (Bennett et al. 1986). This project examined some 4,290 acres of shoreline within Ozark Reservoir, including all of the fee-owned lands.

The effort involved an extensive background and literature review, the development of landform overlay maps for USGS quadrangles in the project area through geomorphological reconnaissance, pedestrian survey, artifact analysis, and data synthesis.

A total of 93 sites were examined, ranging in cultural affiliation from the Early Archaic period to the Historic period. A discussion of site distribution within that portion of the Arkansas River Valley was presented (Bennett et al. 1986).

PREVIOUSLY RECORDED SITES

Several previously recorded sites were visited during this study. Some fell within the study areas; others were visited to assess current site conditions. Sites in the Frog Bayou area were 3CW54, 3CW643, and 3CW26. Those in the center of the study area included 3CW31, 3CW59, 3CW32, 3CW58, 3CW61, and 3CW13. Two of the sites visited (3CW646 and 3CW648) are on Vine-Prairie Creek. Sites in the area between the mouth of the Mulberry River and Bectum Hill were 3FR157, 3FR003, 3FR023, and 3FR018. One site on the Mulberry River (3FR001) was visited.

Testing 3FR157

A field crew, led by John D. Northcutt and consisting of Robert O. Abbott and John Northrip, returned to site 3FR157 to conduct a limited testing investigation. The objectives were to determine the exact location and extent of the surface scatter, to collect any diagnostic artifacts from this surface scatter, and to determine the existence or extent of intact subsurface cultural deposits.

Investigations of August 22 and 23, 1987, showed that although the surface scatter at 3FR157 is large (nearly 600x700m), the density is light, and no intact deposits were observed. There is no clear break between the scatter at 3FR157 and that at 3FR003 (Figure 6), a previously recorded site described in the Ozark Reservoir Papers (Hoffman 1977b). Shovel testing on the site (30x30cm, 30-40cm deep, 10m interval) showed a plowzone extending into a very clayey subsoil. No cultural material was recovered from this soil. It appears that the soils which once contained cultural deposits have been stripped through intensive agricultural use and erosion. The bulk of the site is in row crops on a 3- to 5-percent slope (Figure 7), conditions which seem conducive to erosion (Figure 8). Two areas on the northern part of the site were not available for testing because of dense soybeans to the west and posted private pasture to the east. A single shovel test in a wooded area at the same elevation as the pasture contained more silty loam in the upper 20cm than those tests in cultivated areas, but it did not reveal any intact cultural deposits. The dense beans could be expected to contain an extension of the scatter, being situated adjacent to both 3FR157 and 3FR003. The two sites are topographically distinct, occupying landforms separated by a low area in the bean field. Of the ten tools and tool fragments collected from the surface during the August visit, only one was diagnostic -- a Gary projectile point/knife of gray chert, broken across the midsection apparently during use.

From the evidence gathered during the August 1987 visit, no further testing at 3FR157 is warranted.

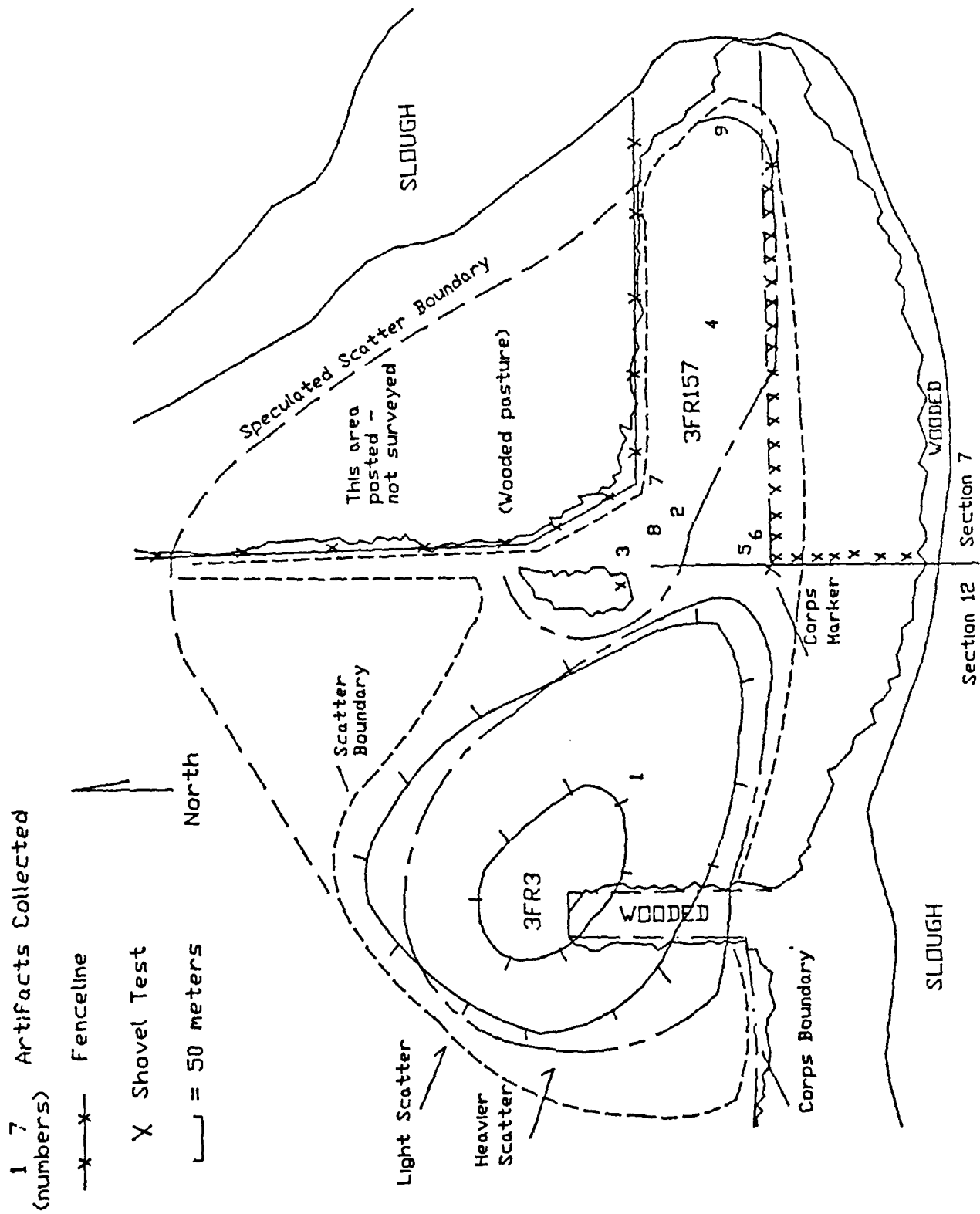


Figure 6. Sketch Map for Sites 3FR157 and 3FR3.



Figure 7. Site 3FR157. View to the west from east end.



Figure 8. Site 3FR157, North Edge of Cultivated Area.

3FR157

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	unidentified biface, broken
surface	cht	unidentified biface, broken
surface	cht	unidentified biface/scrapper
surface	cht	unidentified biface/knife
surface	cht	Gary point, broken
surface	cht	unidentified biface, broken
surface	cht	unidentified biface fragment
surface	cht	unidentified biface fragment
surface	cht	unidentified biface fragment
surface	cht	unidentified biface base
surface	cht	unidentified biface base

3FR1

A brief reconnaissance was made to assess current site conditions at 3FR1, known as the "Spinach Patch Site." An extensive discussion of the archeological investigations at this site is included in Ozark Reservoir Papers (Hoffman 1977b). Most of the landform, mapped by Smith (1986) as a tributary fan, is in pasture, though areas of this appear to have been cultivated in the recent past. There is active erosion occurring on the west and south sides of the site, though no midden is apparent in the cutbank profile. Photos were made of the eroding cutbanks and general site areas (Figures 9, 10, and 11). No collection was made from the dense surface scatter.



Figure 9. Site 3FR1, General Site Area. View to the southwest.



Figure 10. Site 3FR1, Erosion at South End of Landform.
View to the North.



Figure 11. Site 3FR1, Cutbank Erosion on Tributary to Mulberry
Creek. North Side of Site.

3FR23

Described by Hoffman (1977b) as an early ceramic, probably "Gober" complex association, this site produced clay-tempered plain and incised sherds during testing by Bond in 1969. Gary and Scallorn projectile points were also recovered at this time. Also known as the "River Bank Site," the archeological investigations at 3FR23 are presented in Ozark Reservoir Papers. The site is located on natural levee veneer over Arkansas Lateral Bar deposits (Smith 1986). The present channel of the Arkansas River runs adjacent to the site (Figure 12), and buried cultural deposits were observed eroding from the cutbank (Figure 13). A small sample of lithic material was recovered from the cutbank, which was also profiled and photographed. The bulk of the site is in milo (Corps feedplot) and access is good with a four-wheel-drive vehicle. Soil cores #18a and #18b were recovered directly above the cutbank area which contained the highest amount of cultural material in profile.



Figure 12. Site 3FR23, Active Erosion Along Main Channel of Arkansas River. View to the Northwest.



Figure 13. Site 3FR23, Cutbank Profile (Trowels Mark
Extent of Artifact Concentration).

3FR023

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
cutbank	1	cht	-	a	ps	
cutbank	1	cht	-	a	a	
cutbank	1	c/n	-	a	a	
cutbank	1	cht	-	a	ps	
cutbank	1	cht	-	a	a	
cutbank	1	cht	-	a	ps	
cutbank	1	cht	-	a	ps	

ARTIFACTS RECOVERED

Provenience	Material	Description
cutbank	qtz	unidentified groundstone/hammer
cutbank	qtz/sst	unidentified groundstone
cutbank	cht	unidentified biface fragment
cutbank	cht	modified flake, utilized
cutbank	cht	flaked cobble
cutbank	cht	unidentified biface, broken
cutbank	cht	flaked cobble
cutbank	cht	unidentified biface, broken
cutbank	cht	flaked cobble
cutbank	cht	flaked cobble
cutbank	cht	unidentified biface
cutbank	cht	unidentified biface base
cutbank	cht	biface/chopper?

HISTORIC ARTIFACTS RECOVERED

Provenience	Number	Description
cutbank	1	whiteware ceramic rim fragment decorated blue along rim, "feather" paint decoration

3FR018

This site was visited briefly for the purpose of extracting a soil core sample (#19). A light lithic scatter was observed. The site is on a landform mapped by Smith (1986) as undifferentiated tributary floodplain veneered with Arkansas River natural levee deposits and is situated on the crest and slope of the natural levee. Referred to as the "Wheelbarrow Site" in the Ozark Reservoir Papers, it is described in that volume as having an "Archaic 3, Early Ceramic???" stage postulation. The volume relates that, while little material was observed on the surface, members of the Western Arkansas Chapter had removed a good deal of cultural material from the site and recommended further testing if the site was ever in danger of destruction. At 380 feet in elevation, periodic inundation could be a threat to the integrity of the cultural deposits at 3FR018.

3CW646 and 3CW648

The two sites near Vine-Prairie Creek (3CW646 and 3CW648) are both within Corps recreational developments and have suffered severely from the impact of these facilities.

Located at the Vine-Prairie boat ramp, 3CW648 site has probably been completely destroyed. A few chert flakes were observed among the rip-rap on the west side of the boat ramp, but the surface of the site seems to have been planed off and capped with fill.

Though not as heavily disturbed as 3CW648, the campground in which 3CW646 is located has had a substantial impact on the cultural deposits at this site. Lithic debris was observed in a thin scatter 40X100m, and a medium-sized dart point (closely resembling one from 3CW15 described as "Williams B" in Hoffman 1977b) was recovered from this surface scatter. There is active erosion on the southwest shoreline of Vine-Prairie Creek, but due to the intact soils, this is probably more of a threat to the campground than to the cultural deposits.

3CW646

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	unidentified corner-notched point, broken

3CW31, 3CW13, 3CW14, 3CW61, 3CW58, 3CW59, 3CW32

Of the seven sites visited in the central part of the study area, all but one are in natural levee deposits on old cutbanks of the Arkansas River.

Known as the "Bartlett Site," 3CW31 is noted in the Ozark Reservoir Papers as having yielded a dart point fragment, arrow point fragment, an argillite hoe, and both clay-tempered and shell-tempered ceramic fragments. The site was assigned early and late Ceramic stage postulations by Hoffman (1977b). The site is currently in cultivation and was partially covered by winter wheat at the time of the December 1987 visit. A substantial scatter of both prehistoric lithic debris and historic artifacts was observed. This site, on the crest of a large ridge composed of Arkansas River point bar deposits (Smith 1986), shows minimal signs of erosion.

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	cht	2c	pw	ps	
surface	1	cht	2b	pf	a	
surface	1	cht	1c	pf	a	
surface	1	cht	3c	pf	a	
surface	1	cht	2c	p	a	

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	flaked cobble
surface	qtz	pitted and battered cobble

HISTORIC ARTIFACTS RECOVERED

Provenience	Number	Description
CERAMICS		
surface	1	stoneware, dark olive glaze or slip exterior, unglazed or misglazed interior with glaze drips and finger marks, hollow-shaped
surface	1	stoneware, black (probably lead-fluxed) glaze interior, dark brown glaze exterior; hollow-shaped
surface	1	stoneware, brown lead glazed interior with finger marks; brown glazed exterior; hollow-shaped
surface	1	stoneware, dark red-brown slip or glaze interior and exterior; probably hollow-shaped
surface	1	soft paste whiteware, probably late pearlware; white glazed interior with edge depression; white glaze exterior with tiny foot rim and fragment of maker's mark; flat shape
surface	1	pearlware rim sherd, white glaze interior and exterior; with raised molded dots and lines at rim interior; hollow-shaped
surface	1	medium hard paste whiteware, blue-white glaze on interior and exterior, small ridge with blue pooling interior; probably flat-shaped
surface	1	porcelain doll leg with raised molded VII; unglazed, mold marks on two sides
surface	1	medium hard sherd, badly burned after breaking, reduced to black; uneven scratches or marks on interior; possibly smoking pipe bowl fragment

3CW31

HISTORIC ARTIFACTS RECOVERED
(continued)

Provenience	Number	Description
GLASS		
surface	1	purple-tinted bottle neck; two mold marks visible near lower shoulder but not on upper neck or lip; numerous small bubbles
surface	1	purple tinted base of goblet or vase; possible mold mark; no bubbles
surface	1	purple-tinted curved piece, no bubbles
surface	1	short blue glass bottle neck, horizontal striations on neck; some bubbles

Given an Archaic period postulation by Hoffman (1977b), 3CW13 is a long scatter that follows the natural levee crest along an old Arkansas River cutbank. In tall beans at the time of the August 1987 visit, continuous row-cropping has been responsible for a substantial amount of erosional impact. No collection was made from surface scatter; soil core #12 was recovered from the extreme east end of the site.

Site 3CW14 was visited for soil core collection. Hoffman described it as a 100x300-foot habitation site with no midden apparent. He gave it an Archaic 3 stage postulation, based on collections recorded to the museum. The soil core showed a deep A horizon composed of natural levee deposits, indicating a possibility of intact deposits (Figure 14).

Site 3CW61 occupies the same natural levee crest as 3CW13, approximately 500m to the east. The scatter is long and narrow, approximately 50X600m. It yielded several dart points and one clay-tempered sherd during the initial survey (Hoffman 1977b). Gary, Bulverde, Edgewood, Marcos, Williams, Williams B, Motley, and a reworked Meserve point are listed in the Ozark Reservoir Papers surface collection catalogue, and the site was assigned to the Archaic 3 and Early Ceramic periods. The site was in soybeans at the time of the August 1987 visit and showed a generally moderate amount of erosional damage with isolated areas of heavier impact. Soil core #4 was recovered from the western end of the scatter, approximately 30m east of Old County Line Road (Figure 15).

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	unidentified point fragment

Site 3CW58 is positioned at the west end of the long natural levee crest containing 3CW61 and 3CW13 at the point where this landform intersects an abandoned Arkansas River channel. Described by Hoffman (1977b) as Archaic 3/Late Ceramic, this 50X50-yard scatter yielded Gary and Ellis dart points, argillite hoes, and two shell-tempered sherds. The area was plowed at the time of the August 1987 visit, and very little prehistoric material was observed on the surface. Moderate erosional activity was apparent.

Site 3CW59 was assigned to the Archaic 3/Late Ceramic period by Hoffman. It is a small site located on a low rise just east of the confluence of the north and south branches of Crooked Slough. A light lithic scatter was observed on the surface, and soil core sample #8 was recovered from the east end of the site.

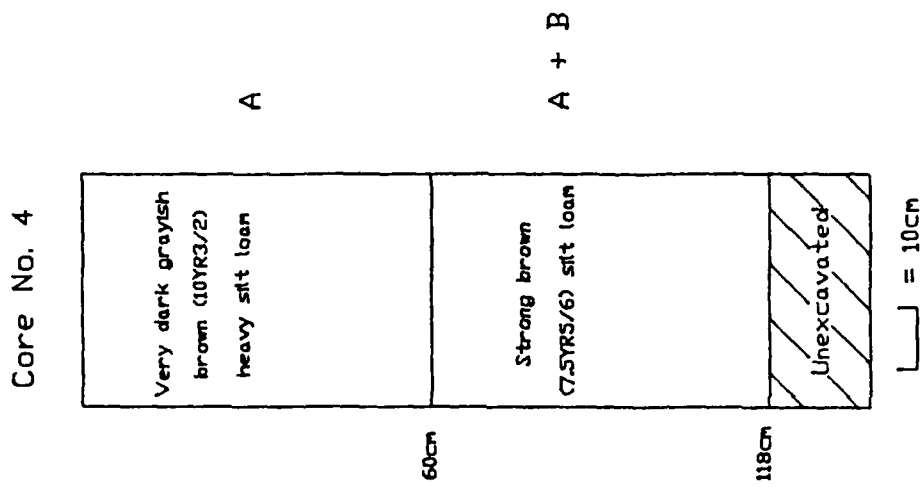


Figure 15. Site 3CW61, Soil Core No. 4.

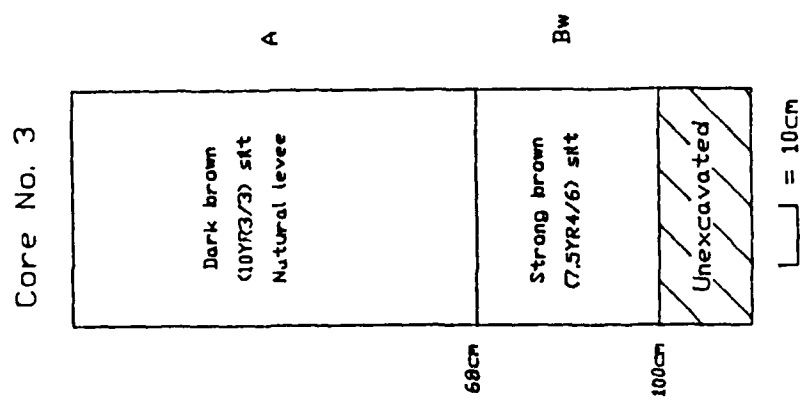


Figure 14. Site 3CW14, Soil Core No. 3.

Described in Ozark Reservoir Papers as being situated on a high levee just north of Dyer Lake and designated as Archaic 3/Late Ceramic (Hoffman 1977b), 3CW32 yielded Langtry-Gary, Williams B, Bulverde, and Yarbrough dart points; Fresno, large triangular, and bifurcated base arrow points; shell- and bone-tempered plain body sherds, and a shell-tempered, decorated ("deep, wide, incised line series, geometric design") body sherd. Smith (1986) shows the landform as being composed of natural levee veneers over Arkansas River point bar deposits, at the junction of two former Arkansas River cutbanks. There are several areas on 3CW32 where severe erosion has formed nick-points, resulting in small cuts down the face of the escarpment. One of these had been filled with metates and other large cobbles in an effort to control the run-off. Soil core #5 was recovered from the western end of the scatter, near the north-south road which leads to Dyer Lake (Figure 16). It was hoped that more soil cores could be recovered from this area, but extremely muddy fields prevented further penetration of the scatter.

3CW26, 3CW643, and 3CW54

Three sites were visited in the Frog Bayou, though no cultural deposit was observed at 3CW26.

Located near the confluence of Frog Bayou and the Arkansas River, 3CW26 site was designated "Archaic 3???" by Hoffman (1977b), and the initial survey recovered Gary and Bulverde dart points from a scatter of undetermined dimensions. As noted in the Ozark Reservoir Papers, the site has been completely destroyed by land leveling. Soil core #16 was recovered from the area indicated as 3CW26 on the original state survey site form.

Site 3CW643 is a small, light scatter of historic and prehistoric debris of unknown cultural affiliation, first described by Bennett et al. (1986). Located on natural levee veneer over Arkansas River point bar deposits (Smith 1986), this site also appears to be the victim of land-leveling agricultural practices. Soil core #15 was recovered from the center of 3CW643.

Designated "Archaic 3???" by Hoffman (1977b), 3CW54 is a surface scatter of approximately 100X100 yards that yielded one Bulverde dart point and an argillite spade at the initial survey. Located on Arkansas River natural levee covering undifferentiated tributary floodplain, this site was in cultivation during the August 1987 visit. The landform contains extensive areas of surface erosion, and no intact cultural deposits were observed in the numerous nick-points available for inspection.

Core No. 5

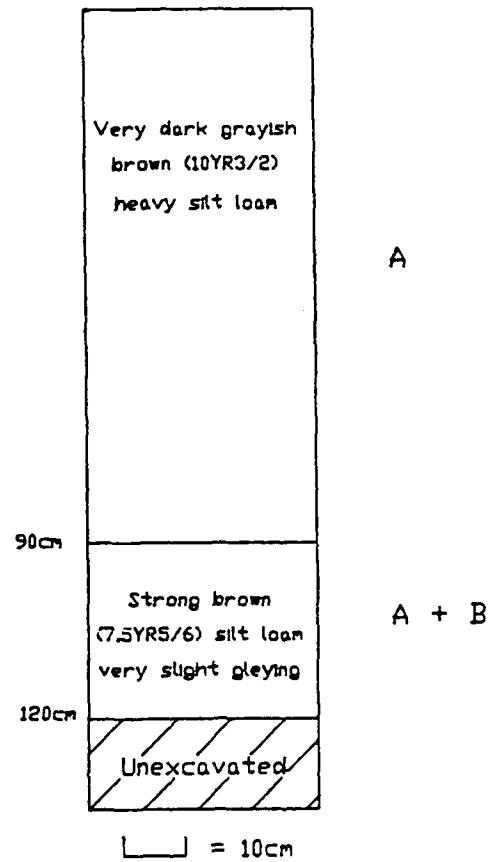


Figure 16. Site 3CW32, Soil Core No. 5.

PREVIOUSLY UNRECORDED SITES

3CW693

This site consists of a very light lithic scatter observed on the slope of an old cutbank escarpment (Figures 17 and 18). One chert flake, a metate fragment, a possible abrader, and a piece of chunky chert shatter were recovered from the surface of the escarpment in an area approximately 50x70m. Though this area is indicated on the topographic map as a large rise, field inspection suggested that the landform is part of the long abandoned cutbank running from the eastern edge of Section 17 to the southwest corner of Section 7. Site 3CW693 is located approximately 150m east of 3CW694, but both may share this landform. The sites are separated by a large drainage ditch which, along with the intersection of two field access roads, has altered the terrain enough to create topographic confusion. Shovel testing showed a light brown silty loam from 0 to 25 cm below the surface.

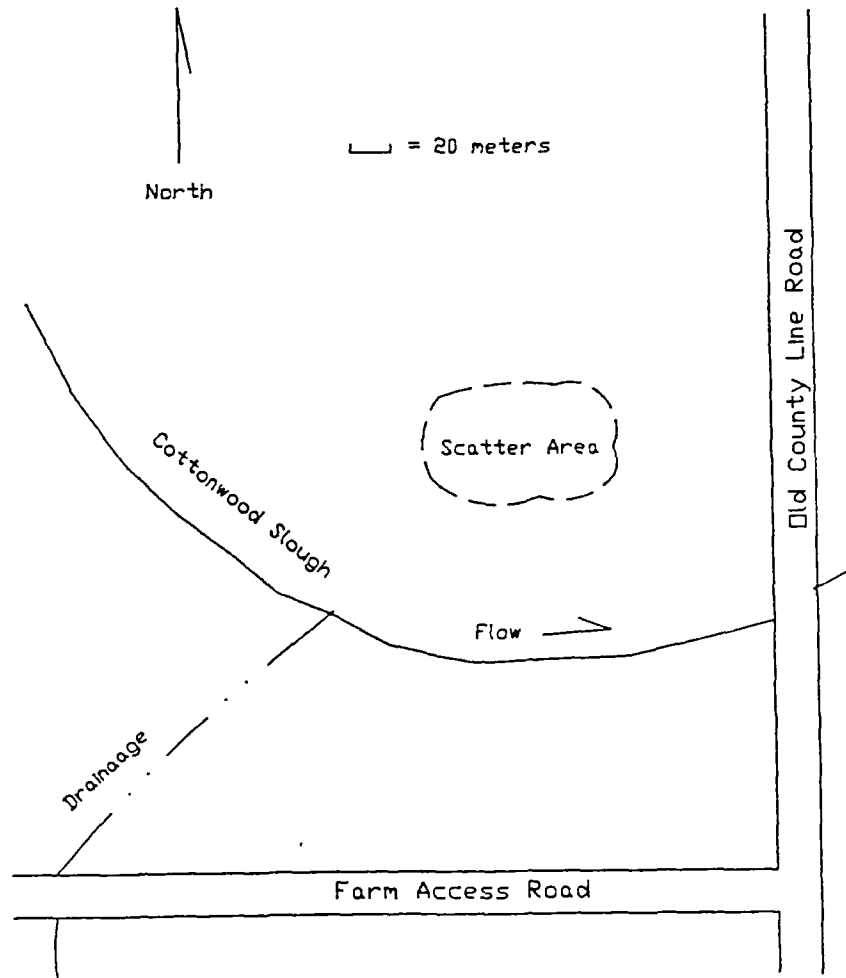


Figure 17. Sketch Map of Site 3CW693



Figure 18. Site 3CW693. View to the Southwest from the Northeast End of the Site.

3CW693

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	cht	-	a	a	block shatter

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	unid	modified flake, utilized
surface	qtz?	groundstone
surface	qtz?	metate?

3CW694

This site is a 100x200m lithic scatter on a low rise, just east of an old Arkansas River channel (Figure 19). The site is located inside the junction of two ditches, and a farm road runs immediately to the south of the scatter. The relationship of the scatter to the Arkansas River point bar indicated on the Mulberry geomorphic overlay map is unclear but appears to be part of the point bar associated with the old channel. The field was in beans (Figures 20 and 21), but visibility at the time of the visit was adequate for establishing density and extent of the lithic surface distribution. Subsurface tests on the edge of the rise showed dry light brown silt loam to 35cm below the surface (Figure 22). Surface scatter concentrations were designated A and B, and collection in Area A was limited to a 20x20m area along the rise. The initial visit recovered chert flakes, tested cobbles, mano fragments, and one possible Gary projectile point/knife. One small sherd was recovered from the surface during coring.

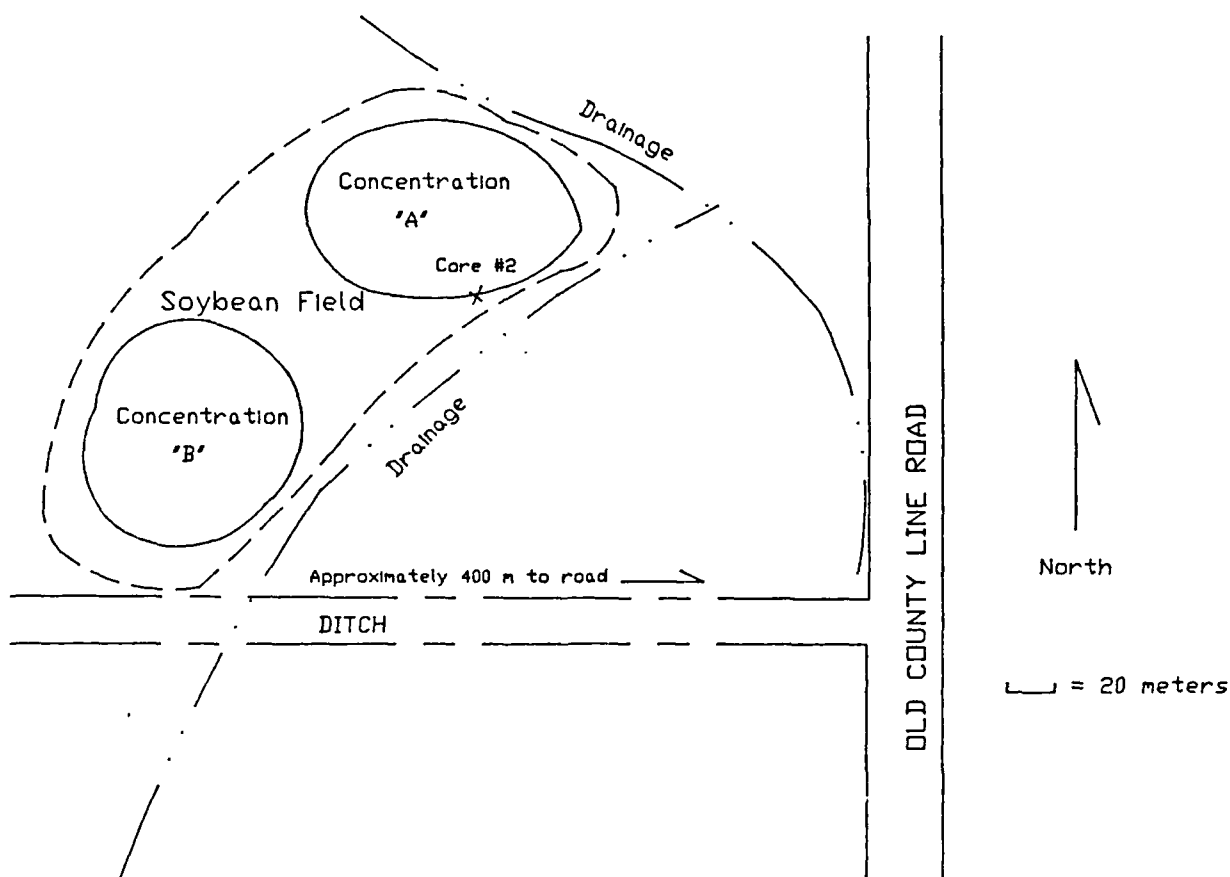


Figure 19. Sketch Map of Site 3CW694.



Figure 20. Site 3CW694, View to the Northwest from Southwest Edge of Site.



Figure 21. Site 3CW694, View to the Northeast from Southeast End of Site.

Core No. 2

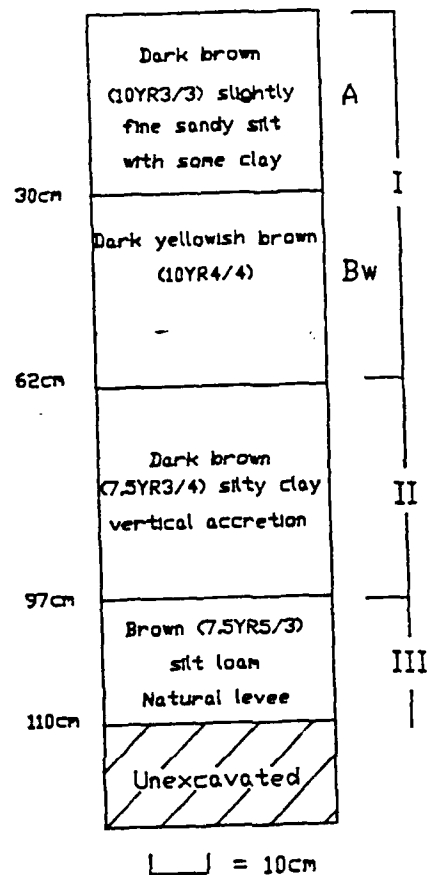


Figure 22. Site 3CW694, Soil Core No. 2.

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	cht	-	a	ps	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	a	
surface	1	cht	-	a	a	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	a	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	a	
surface	1	und	-	a	a	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	a	heat treated, heat spalls
surface	1	cht	-	a	p	
surface	1	cht	-	a	a	
surface	1	cht	-	a	ps	
surface	1	cht	-	a	a	

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	dart point midsection
surface	cht	flaked cobble
surface	qtz/sst	unidentified groundstone fragment
surface	qtz/sst	unidentified groundstone fragment
surface	unid	unidentified groundstone
surface	qtz	flaked cobble, broken
surface	cht	flaked cobble
surface	sst	unidentified groundstone fragment
surface	cht	exhausted core
surface	cht	modified flake
surface	cht	cobble, flaked

3CW695

Located approximately 100m west of the present Mulberry River channel, this site is on the north side of a ditch which seems to follow the old point bar/terrace contact (Figure 23). Very little lithic material was observed on the surface; however, inspection of the cutbank along the north side of the ditch revealed a well-defined buried soil with chert flakes in situ. The top 20cm of this cutbank profile is composed of light silty loam over 25cm of a darker silty loam containing the cultural material (20 to 45 cm below the surface). The lower 15cm (45 to 60 cm below the surface) has a reddish tint and contains a higher percentage of sand. A collection was made of material which had eroded out of the bank, but the dense beans made it impossible to determine if site limits could be defined by the surface scatter. During the December visit, a light lithic scatter was observed in a 40x50m area.

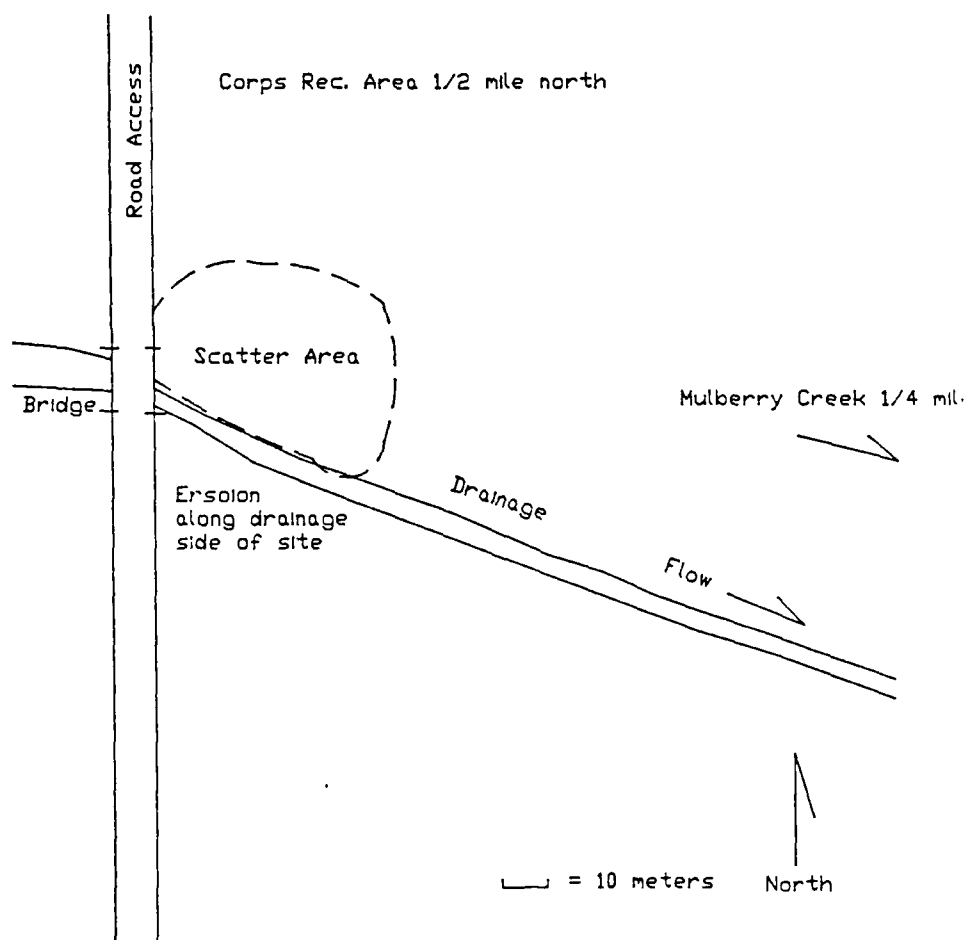


Figure 23. Sketch Map of Site 3CW695.

3CW695

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	und	-	a	a	
surface	1	und	-	a	ps	
surface	1	cht	-	a	a	
surface	1	cht	2c	pf	ps	bulb scar
surface	1	cht	1c	p	a	

ARTIFACTS RECOVERED

Provenience	Material	Description
cutbank	cht	modified flake, utilized
cutbank	qtz/sst	mano, broken
cutbank	qtz/sst	mano fragment
cutbank	qtz	modified flake, utilized
cutbank	qtz/sst	unidentified groundstone fragment
surface	qtz/sst	mano
surface	unid	modified flake, utilized
surface	cht	tested cobble

3CW696

This site was observed in August to be a very light lithic scatter, 150x200m, located approximately 700m north of 3CW694 (Figure 24). The field was in beans, though visibility was good between rows. Shovel tests showed a uniform medium brown silty sand to 25cm below the surface. The surface collection includes a large river cobble with multiple flake scars, chert decortication, and thinning flakes.

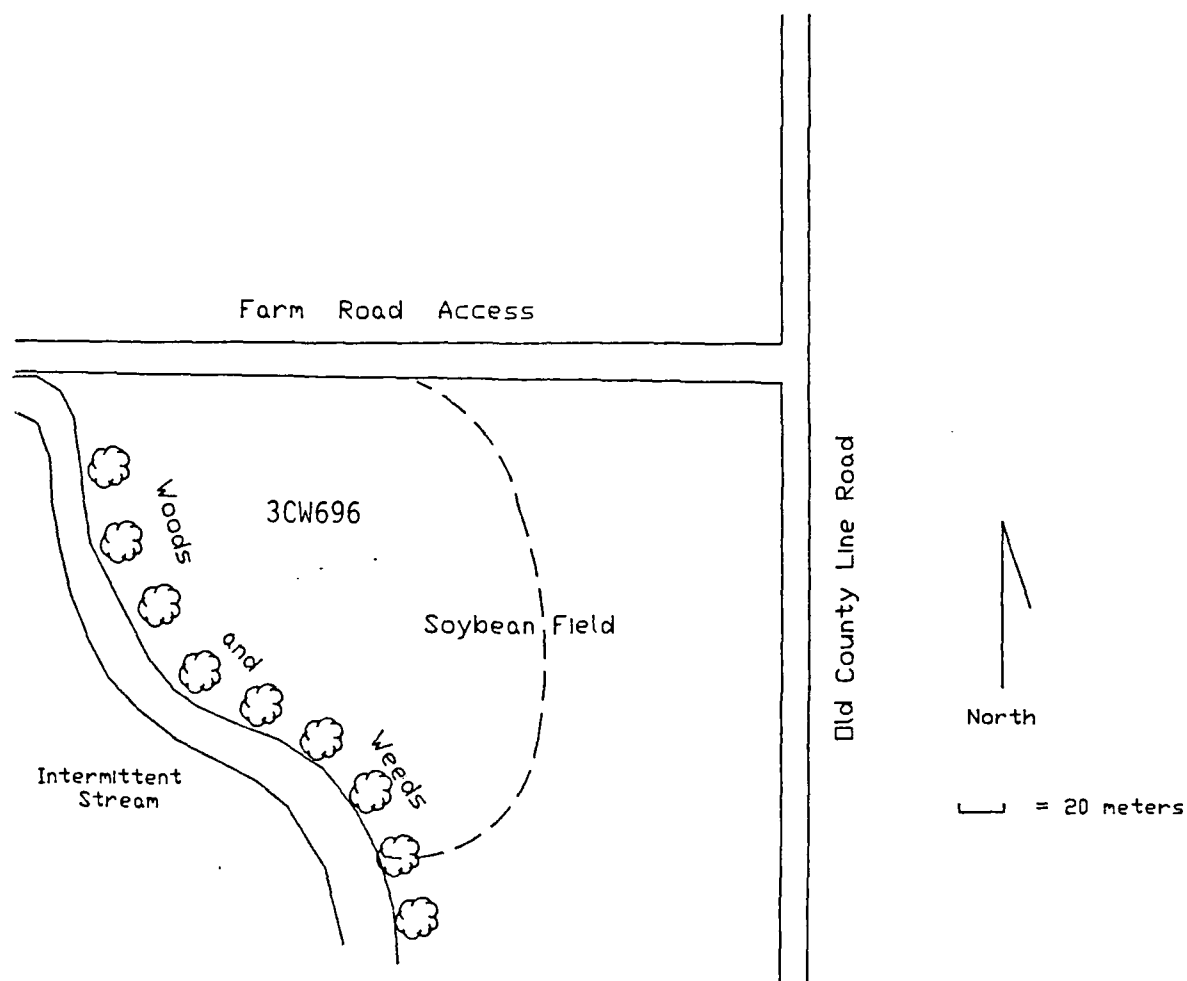


Figure 24. Sketch Map of Site 3CW696.

3CW696

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	cht	-	dp	a	
surface	1	cht	-	a	a	

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	flaked cobble
surface	cht	flaked cobble
surface	cht	modified flake, utilized

3CW697

This site is situated at the southern tip of the picnic area above the boat ramp at the Vine-Prairie recreation area (Figure 25). Several chert flakes were recovered from disturbed areas within 200m of the south tip of the high picnic area, covering an area of approximately 50x200m. The surface of this area has been extensively landscaped, resulting in severe impact to the cultural deposits. Subsurface testing showed disturbed light brown silty sand with sandstone pebbles and cobbles to 25 cm below the surface. No intact cultural deposits are expected to exist.

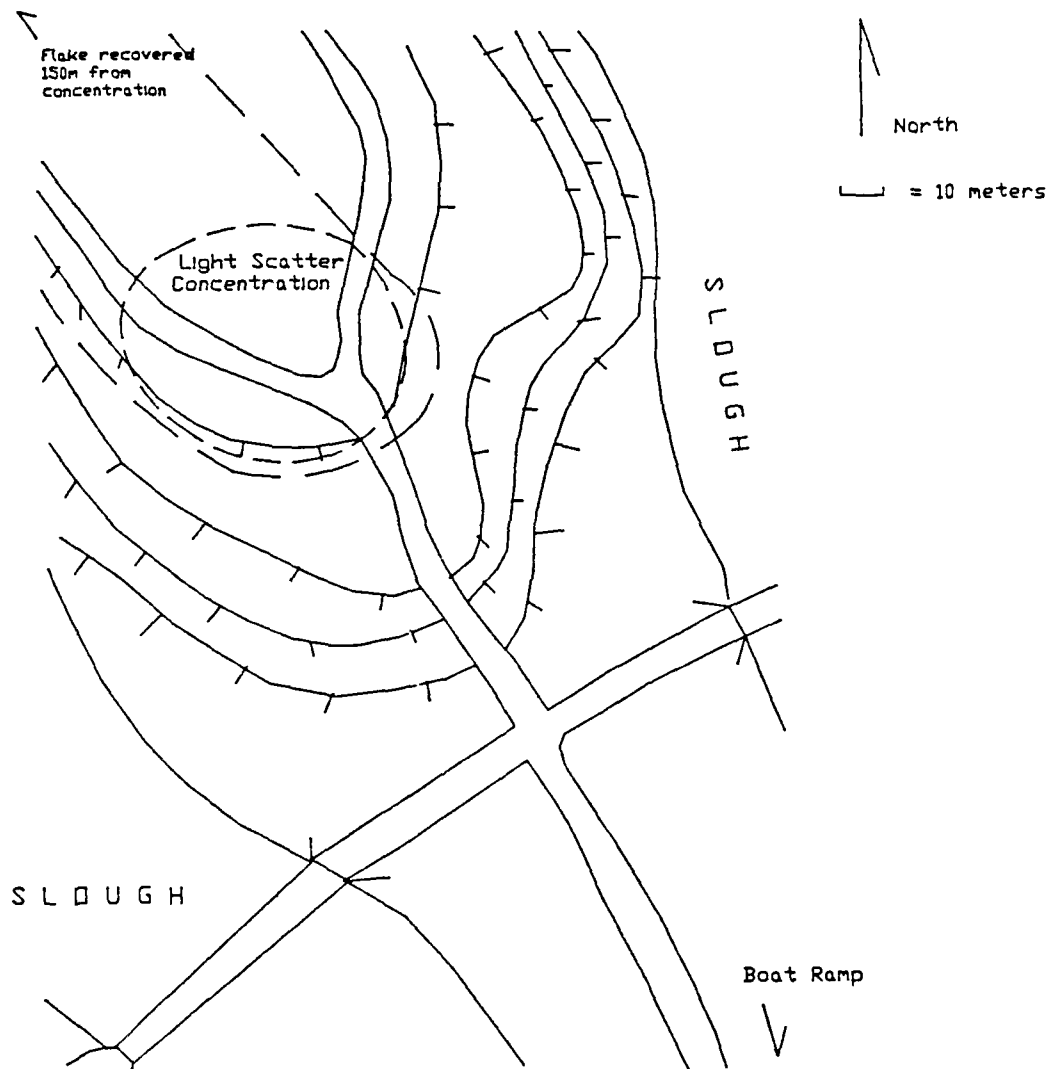


Figure 25. Sketch Map of Site 3CW697.

3CW697

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	c/n	-	a	ps	
surface	1	c/n	-	pf	a	possible mod.
surface	1	cht	-	a	a	
surface	1	qtz	-	a	ps	
surface	1	cht	-	a	a	

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	flaked cobble
surface	unid	unidentified biface, broken

3CW698

Consisting of a light historic/prehistoric surface scatter, 50x150m, this site is along the edge of an old Arkansas River point bar/channel contact (Figure 26). The area was in beans at the time of the August visit, with fair visibility between rows. Subsurface tests showed a uniform light brown silty loam to a depth of 30cm. Historic artifacts observed in the scatter included glass, ceramic, and metal fragments, all small and obviously had been repeatedly impacted by agricultural activities. The only historic artifact collected was a stoneware base fragment with a portion of a maker's mark. Prehistoric artifacts recovered were limited to a piece of blocky shatter and a metate fragment. This site shows a substantial amount of impact from erosion and row-crop cultivation. Neither prehistoric nor historic intact deposits are expected to exist.

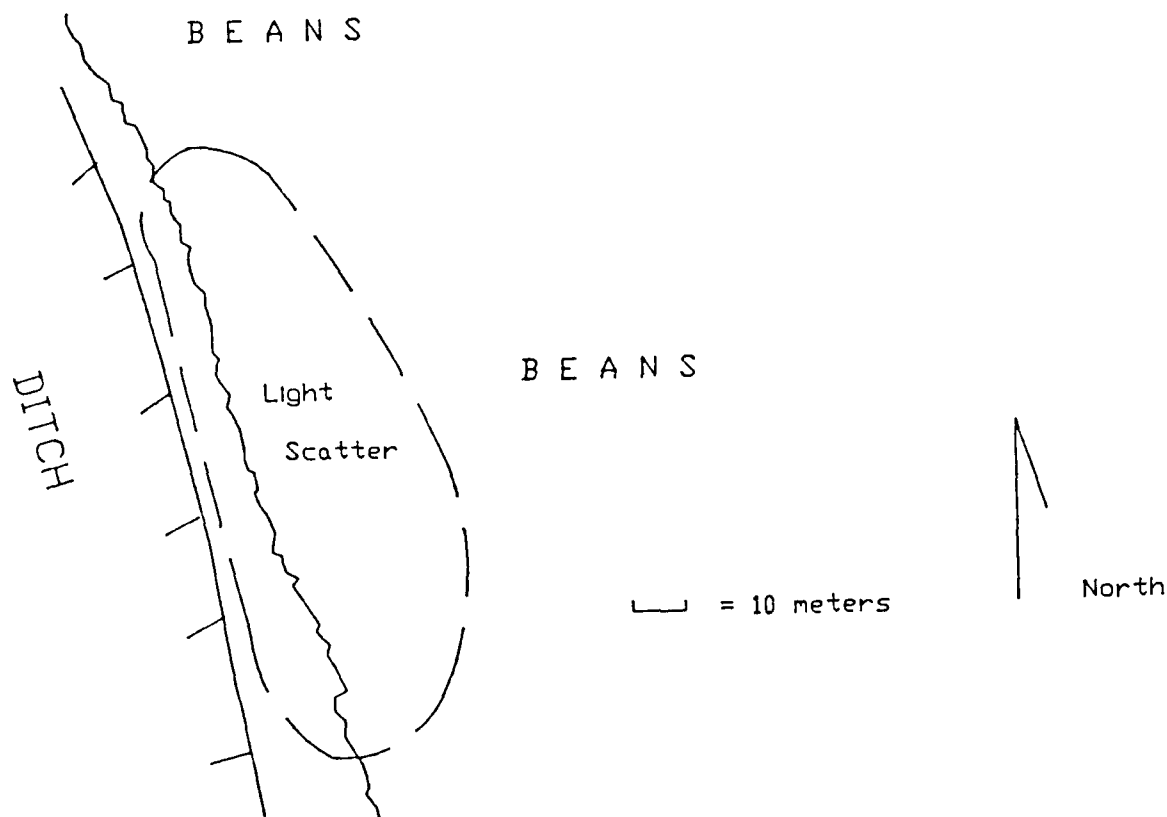


Figure 26. Sketch Map of 3CW698

3CW698

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	unid	-	a	ps	

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	qtz/sst	metate fragment

HISTORIC ARTIFACTS RECOVERED

Provenience	Number	Description
surface	1	whiteware ceramic with maker's mark (horse?)

3CW699

This is a light lithic (prehistoric) and historic scatter along the surface of a point bar/channel contact (Figure 27). Shovel tests showed a uniform light brown sandy silt loam to 25cm below the surface, and inspection of a nick-point at the edge of the escarpment showed no obvious buried soils. Beans were planted on the site at the time of the August visit, but there was approximately 30% visibility between the rows. The scatter extends 50x100m along the edge of the escarpment and includes ceramic, glass, and metal fragments (historic), and prehistoric lithic debris. Historic collection was selective, including stoneware fragments and a glass bottle neck. Prehistoric collection was total, including chert flakes, tested cobble, and hammerstone.

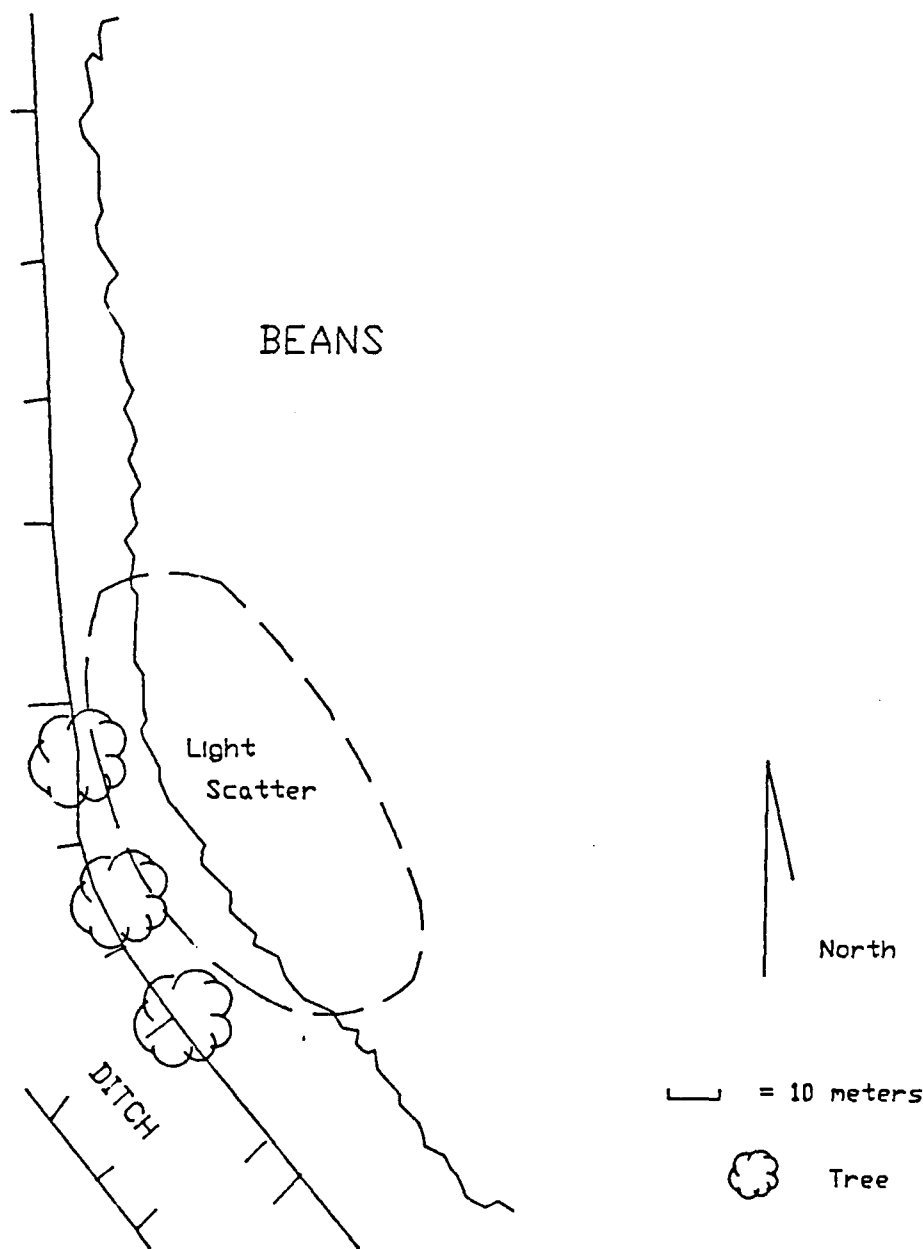


Figure 27. Sketch Map of Site 3CW699.

3CW699

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	c/n	-	a	a	possible mod.
surface	1	nov	-	a	a	
surface	1	unid	-	a	a	
surface	1	cht	-	a	a	
surface	1	unid	-	a	a	

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	flaked cobble
surface	cht	modified flake, utilized
surface	cht	flaked cobble

HISTORIC ARTIFACTS RECOVERED

Provenience	Number	Description
-------------	--------	-------------

CERAMICS

surface	1	whiteware ceramic fragment, glazed
surface	1	whiteware ceramic rim fragment, glazed
surface	1	whiteware ceramic rim fragment, glazed

GLASS

surface	1	glass bottleneck, stopper-top, broken
---------	---	--

3CW700 and 3CW701

3CW700 (Figure 28) and 3CW701 (Figure 29) are both single-artifact sites located between the northernmost abandoned channel system and Vine-Prairie Creek.

3CW700 is a cobble showing flake scars and blocky shatter. Intensive surface survey of a 100x100m area failed to yield any other artifacts. A soil probe showed the plowzone to be 25cm below the surface.

3CW701 is a chert biface (projectile point/knife) fragment recovered from a plowed area approximately 200m south of Vine-Prairie Creek. The soil is a medium brown silty loam which does not change to 30cm below the surface. Though the surrounding area was scrutinized, no other cultural material was recovered.

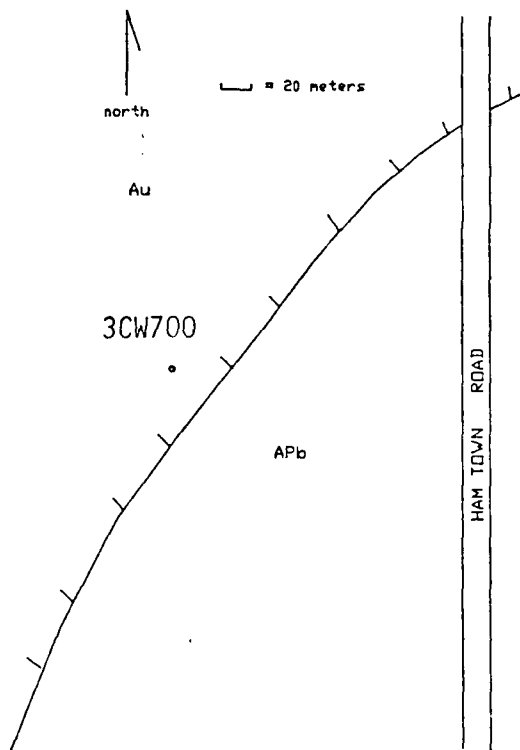


Figure 28. Sketch Map of Site 3CW700.

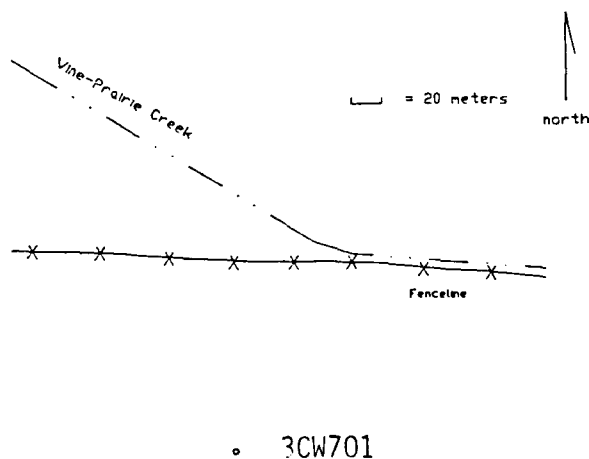


Figure 29. Sketch Map of Site 3CW701.

3CW700

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	qtz?	flaked cobble fragment

3CW701

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	cht	unidentified biface preform?

3CW702

3CW702 is a light scatter of historic and prehistoric lithic artifacts along 500m of the north edge of an old Arkansas River point bar in the northeast quarter of Section 8. The scatter is located on three distinct sandy rises in a 500x70m area (Figure 30). The site was located during the coring visit in December (Figure 31). (Visibility in the area during the first visit was hampered by tall beans.) The scatter is continuous though concentrated on the rises. Historic artifacts recovered consist of brick, ceramic, glass, and metal fragments; prehistoric material collected included chert flakes and shatter and fire-cracked rock. The site appears to have been cultivated for some time and shows signs of active erosion.

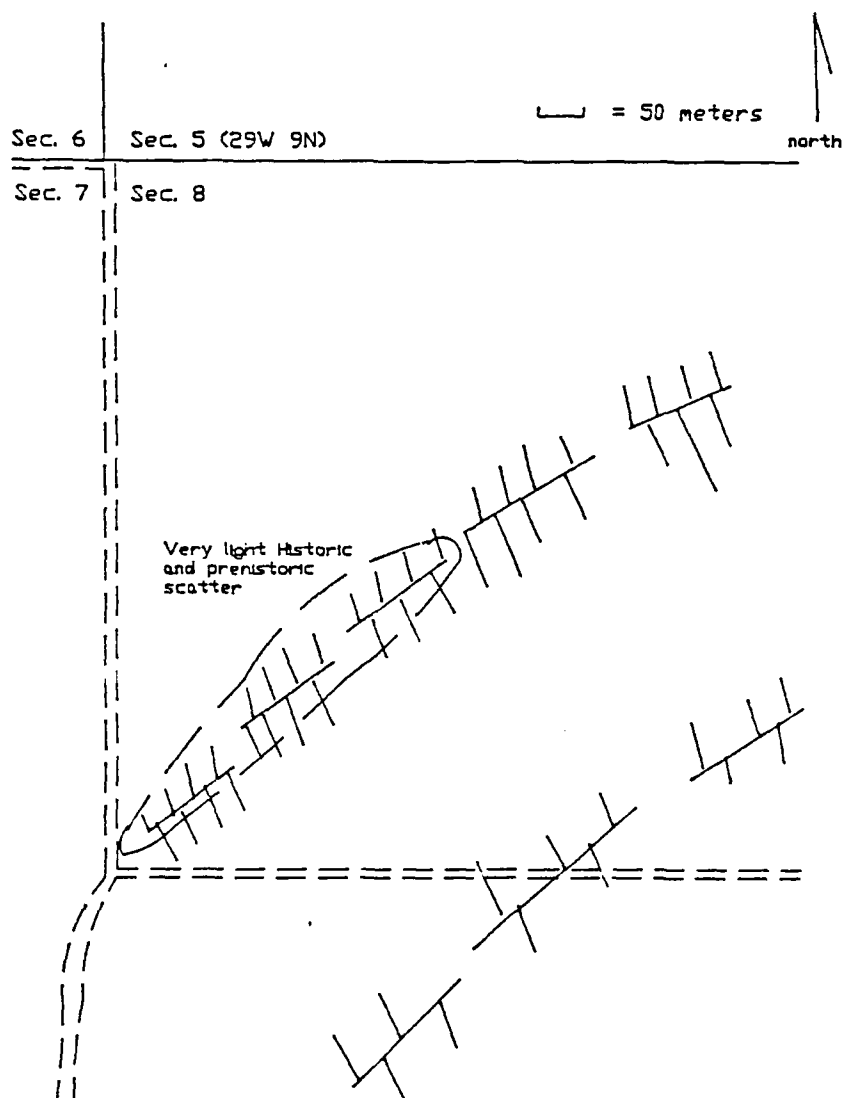


Figure 30. Sketch Map of Site 3CW702.

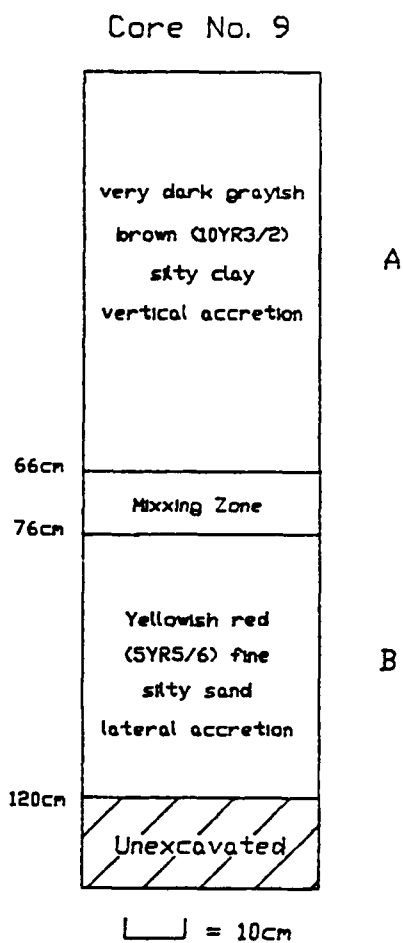


Figure 31. Site 3CW702, Soil Core No. 9.

3CW702

FLAKES RECOVERED

Provenience	Number	Material	Size	Platform	Cortex	Notes
surface	1	cht	1c	p	ps	
surface	1	cht	2b	pf	a	
surface	1	cht	2c	p	ps	

ARTIFACTS RECOVERED

Provenience	Material	Description
surface	unid	blocky chunk, one end bifacially modified
surface	cht	biface
surface	sst	mano fragment
surface	sst	mano fragment
surface	sst	mano fragment

HISTORIC ARTIFACTS RECOVERED

Provenience	Number	Description
-------------	--------	-------------

CERAMICS

surface	1	stoneware fragment, light-brown glaze interior and exterior, finger marks on interior, paste soft for stoneware, maybe misfired
surface	1	stoneware fragment from hollow-shaped vessel; interior very dark brown glaze with finger marks; exterior salt-glazed with smoothing marks; extremely soft paste, very little grit
surface	1	stoneware fragment, interior dark olive glaze; exterior salt glaze; sherd very thin

HISTORIC ARTIFACTS RECOVERED
(continued)

Provenience	Number	Description
CERAMICS (cont'd)		
surface	1	pearlware sherd from flat-shaped vessel with foot rim (?) showing wear, white glaze on interior and exterior with blue tint
surface	1	pearlware sherd, white glaze on one side, glaze broken off on other side; flat-shaped
surface	1	whiteware, soft paste fragment with foot rim; slight blue pooling on glaze; curved in two directions
surface	1	whiteware, soft paste rim sherd (pearlware?); hand-painted medium brown band; interior glaze altered after firing; lip sherd from plate?
surface	1	whiteware, soft paste rim sherd, overglaze transfer floral motif, slight scalloping on rim, possibly molded decoration between rim and transfer print; shape unclear
surface	1	porcelain rim fragment, edge of feature (handle?)
METAL		
surface	1	cast iron bowl rim fragment
GLASS		
surface	1	blue-green jar base fragment, 2x6cm
surface	1	milk glass liner lid fragment, 2x3cm
surface	1	base fragment (probably from jar), with bubbles, not tinted, circular striation marks
surface	1	purple-tinted, curved fragment with concentric striations and small bubbles

INTERPRETATION AND RECOMMENDATIONS

As stated in the goals of the project, it was hoped that surface survey of specific landforms of the study area would provide information leading to a more comprehensive picture of use patterns in the study area. Although access to all the landforms of interest was not possible during the August and December 1987 field work, information generated by previous archeological investigations can be integrated with results of this effort to provide at least general answers to questions posed in the project goals.

Site location data provided by this effort, combined with records of sites registered with the Arkansas Archeological Survey and geomorphologically annotated quadrangle sheets for the project areas, were used to produce Figures 32 and 33. Sites not shaded on these figures were recorded during this project. These figures show that, aside from sites which occupy the Arkansas River sediments reworked by Mulberry River and Frog Bayou, a very high percentage of the known sites are located on Arkansas River natural levee veneers overlaying abandoned channel cutbanks. The exceptions are sites 3CW31, 3CW60, and 3CW702, located on the ridge and swale structures of the point bar deposits inside the abandoned channel which contains Vine Prairie Lake.

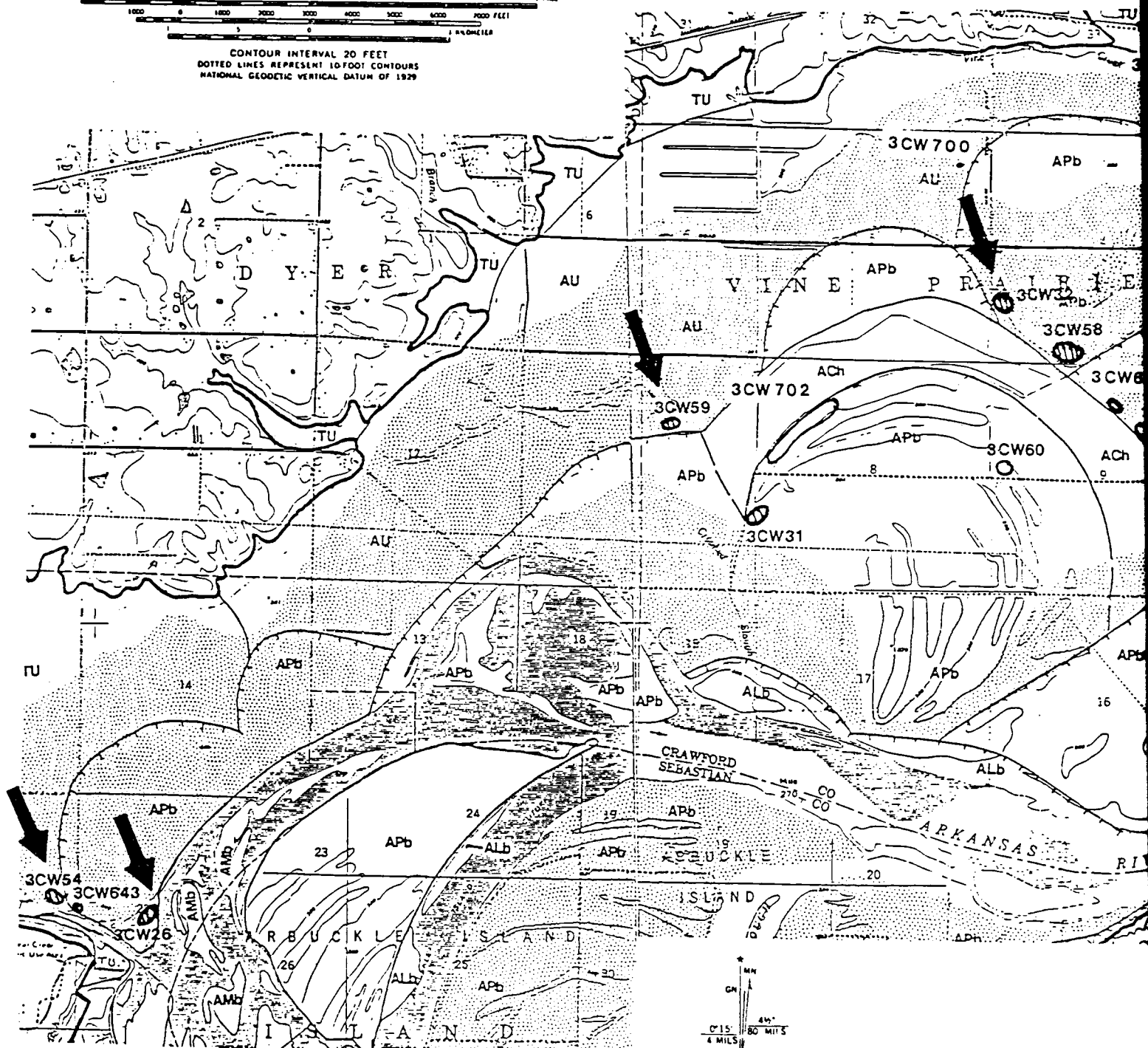
In an attempt to establish a chronology for the formation of these landforms, as represented by the temporal assignments for collections from sites in this area, we have constructed Table 1, relying heavily on information provided in the Ozark Reservoir Papers (Hoffman 1977b).

Table 1. Spatial Distribution of Chronological Markers in the Study Area.

	Arrow Points	Ceramics SH CL		Arg/slt S/H	Gary R P		Williams W WB	Bulverde
3CW54				X				X
3CW26					X			X
3CW59	X				X			X
3CW31	X	X	X	X				
3CW32	X	X		X			X	X
3CW58		X	X	X	X			
3CW60					X			
3CW61			X	X	X	X	X	X
3CW646							X	
3CW13				X	X			X
3CW21			X	X				
3FR002				X		X		
3FR001	X		X	X	X	X		
3FR021						X		X
3FR020					X		X	



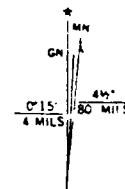
CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETTIC VERTICAL DATUM OF 1929



Map Symbol Geomorphic Feature

ACo	Abandoned Arkansas River Course
ACH	Abandoned Arkansas River Channel
APb	Arkansas River Pointbar
AMB	Arkansas River Middle Bar
ALb	Arkansas River Lateral Bar
AU	Arkansas River Undifferentiated Floodplain
AT	Arkansas River Terrace
ANK	Arkansas River Natural Levee
TCo	Abandoned Tributary Course
TCh	Abandoned Tributary Channel
TP	Tributary Pointbar
TU	Undifferentiated Tributary Floodplain
TF	Tributary Alluvial Fan
TT	Tributary Terrace
US	Upland Slope
—	Study Area Boundary
—	Former Arkansas River Bank

UTM GRID AND 1981 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



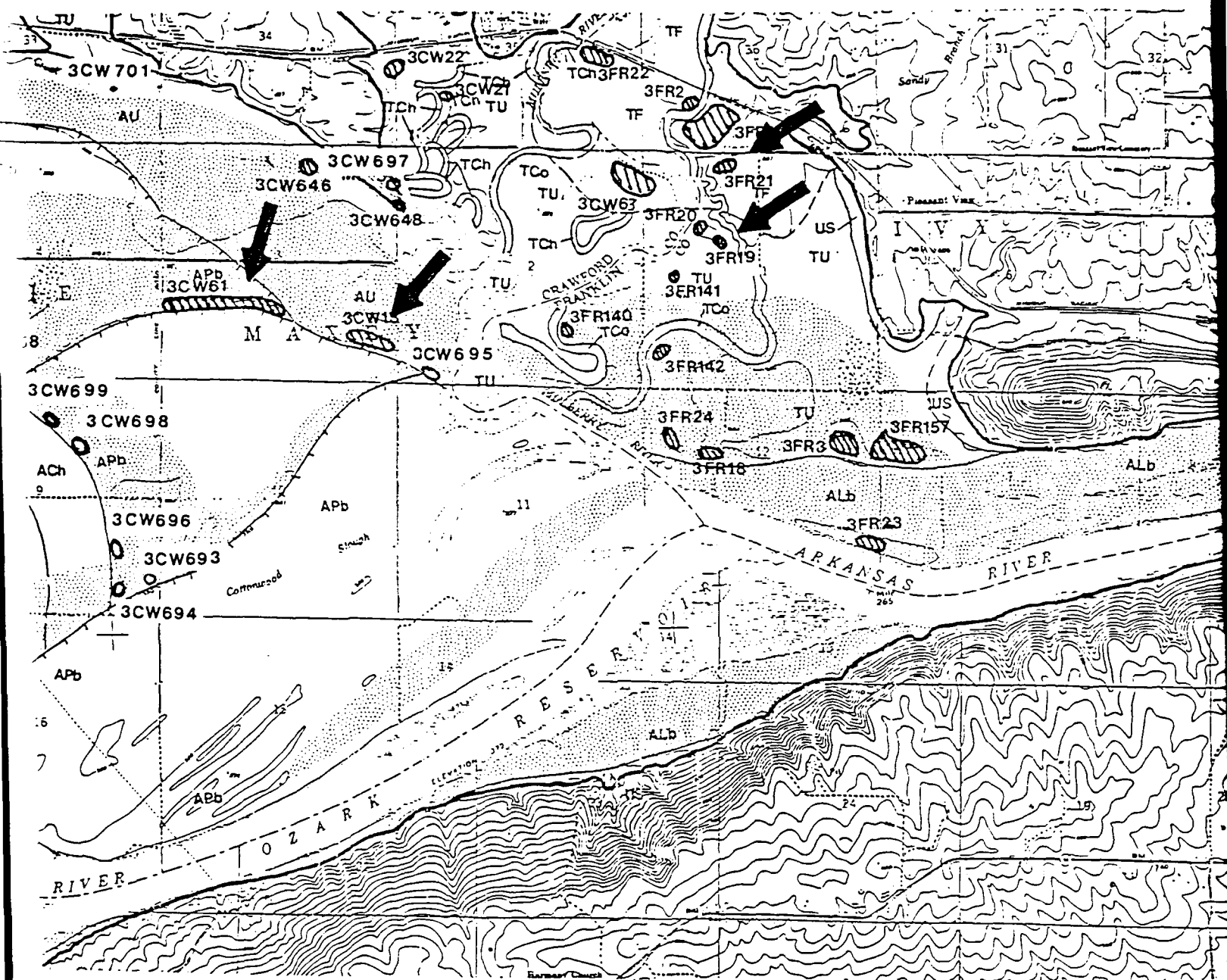


Figure 32. Sites With Bulverde Projectile Points in Their Collections.

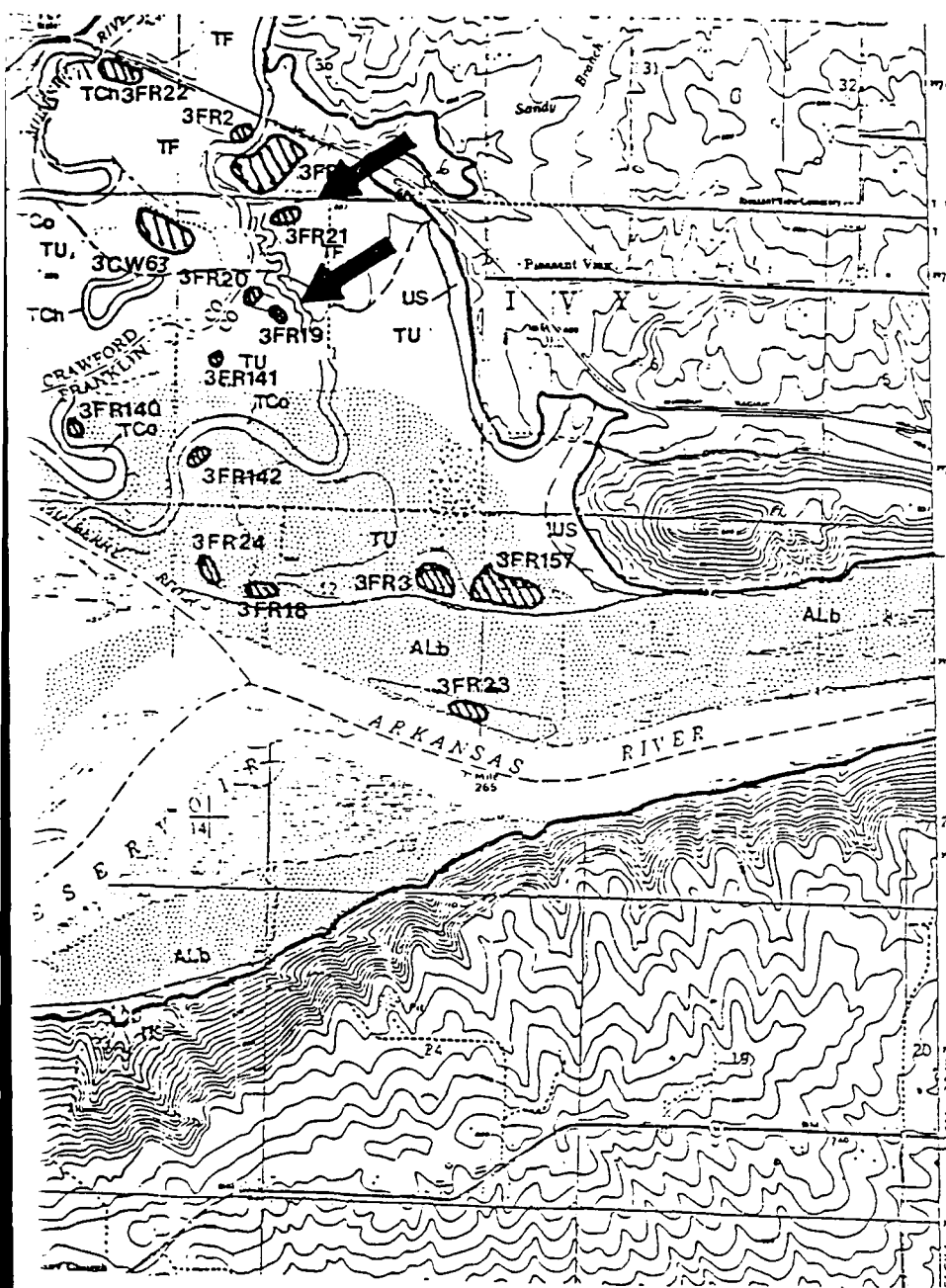
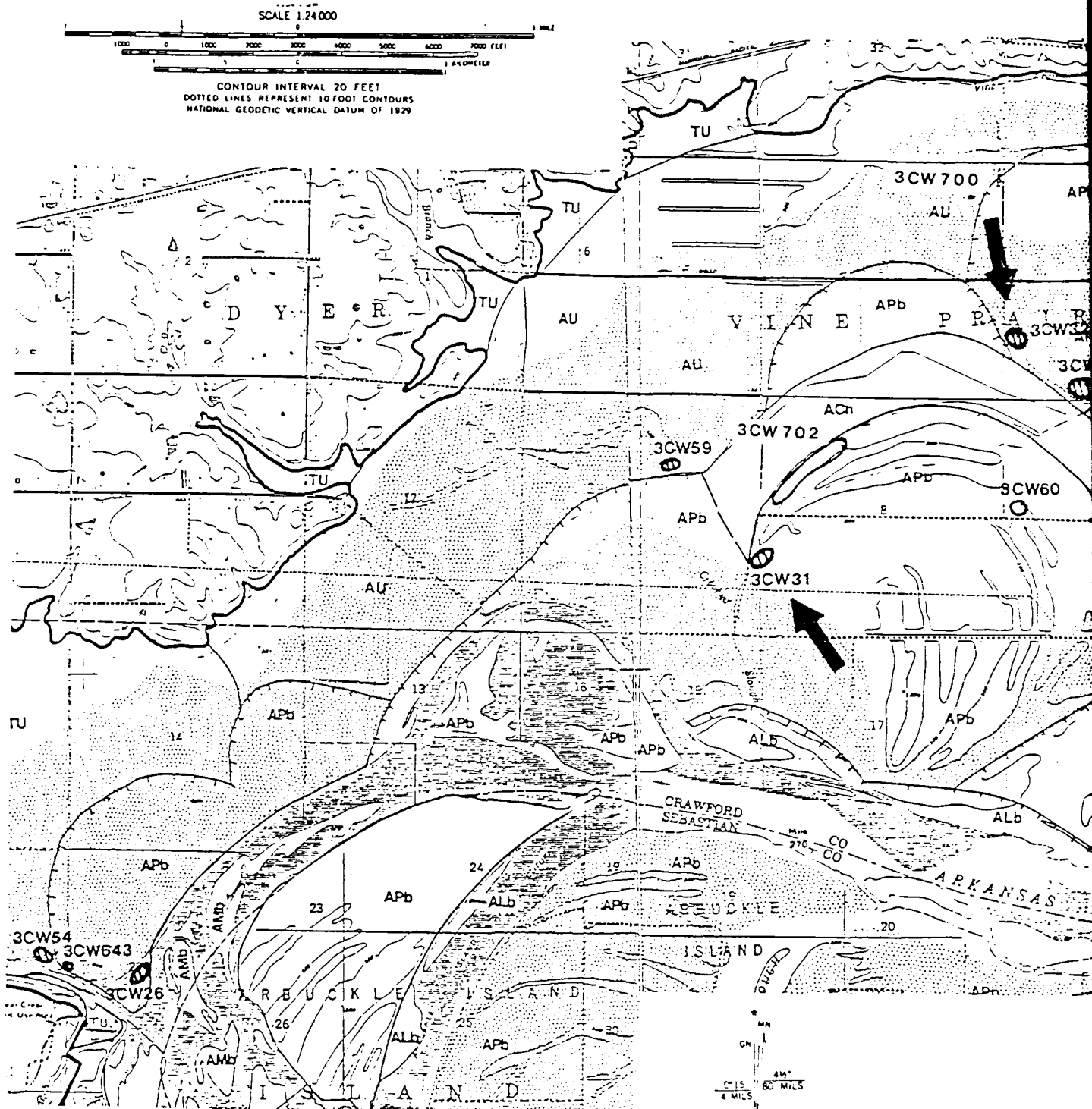


Figure 32. Sites With Bulverde Projectile Points in Their Collections.



Map Symbol Geomorphic Feature

- | | |
|------|--|
| ACo | Abandoned Arkansas River Course |
| ACH | Abandoned Arkansas River Channel |
| APb | Arkansas River Pointbar |
| AMB | Arkansas River Middle Bar |
| ALb | Arkansas River Lateral Bar |
| AU | Arkansas River Undifferentiated Floodplain |
| AT | Arkansas River Terrace |
| ARNL | Arkansas River Natural Levee |
| TCO | Abandoned Tributary Course |
| TCH | Abandoned Tributary Channel |
| TP | Tributary Pointbar |
| TU | Undifferentiated Tributary Floodplain |
| TF | Tributary Alluvial Fan |
| TT | Tributary Terrace |
| US | Unland Slope |
| — | Study Area Boundary |
| — | Former Arkansas River Bank |

UTM GRID AND 1981 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET

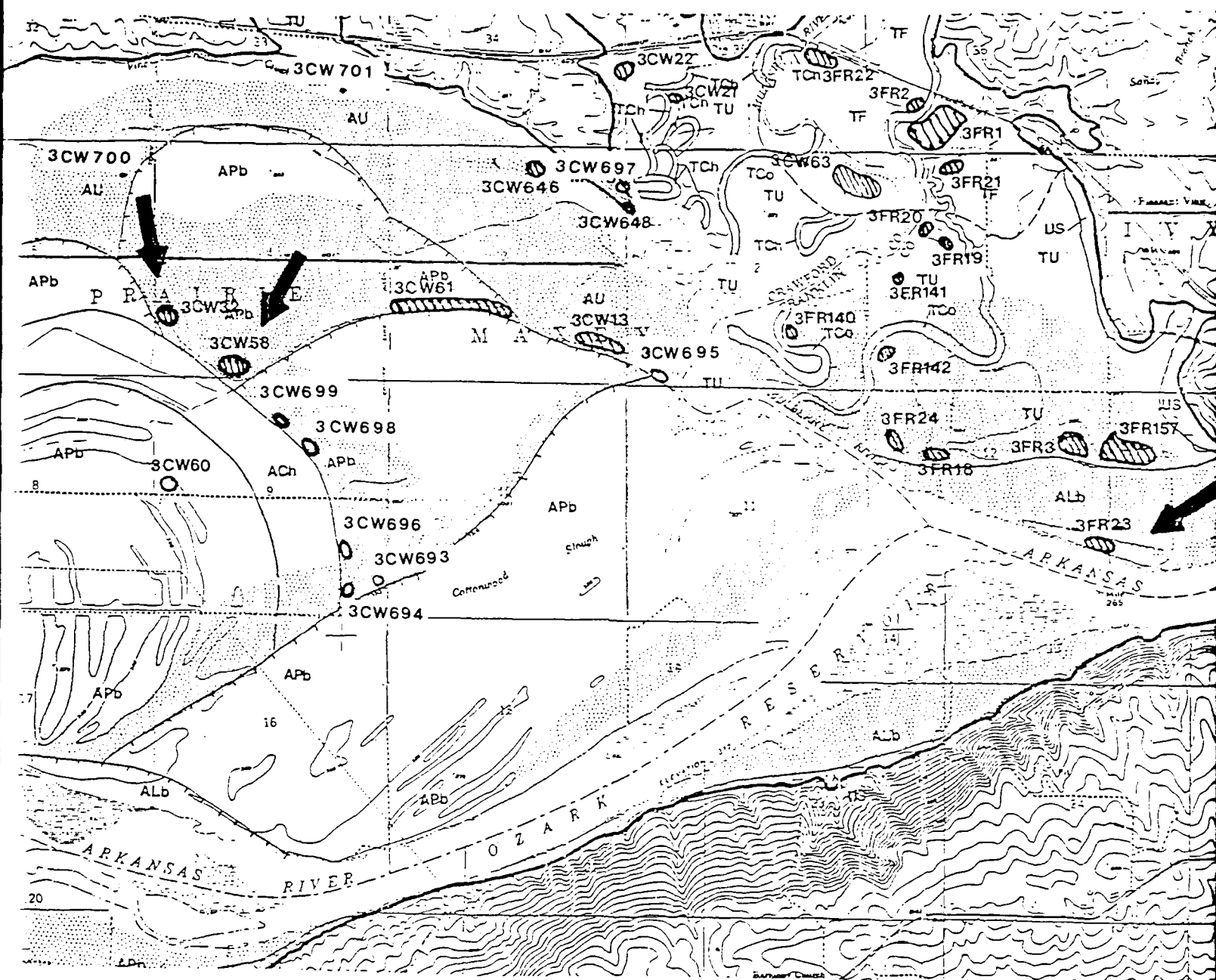


Figure 33. Sites With Pottery or Their Coll

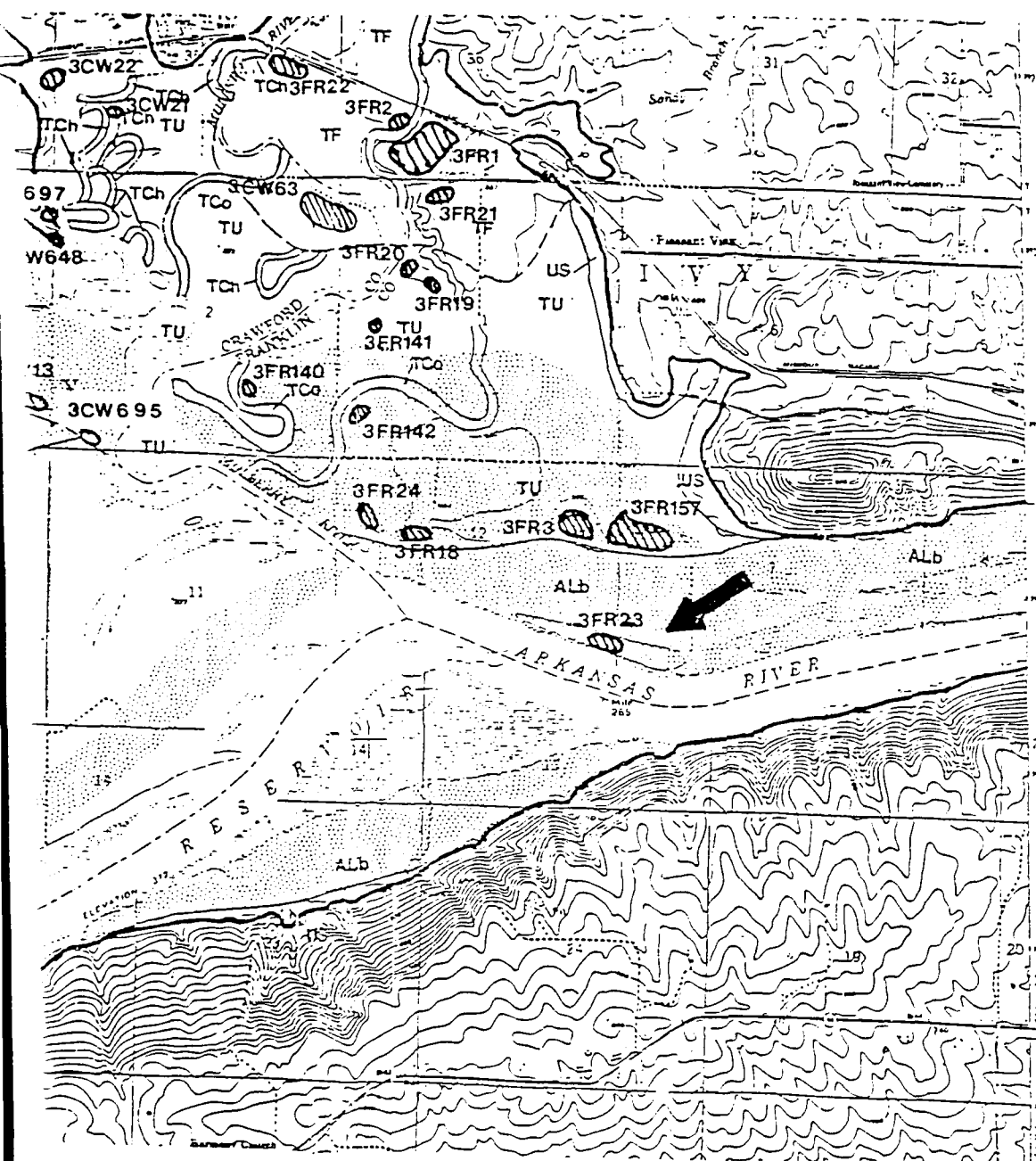


Figure 33. Sites With Shell-Tempered Pottery or Arrowpoints in Their Collections.

Table 1. Spatial Distribution of Chronological Markers in the Study Area.
(continued)

	Arrow Points	Ceramics		Arg/slt S/H	Gary		Williams		Bulverde
		SH	CL		R	P	W	WB	
3FR019					X		X	X	X
3FR140		X	X						
3FR024			X	X	X				
3FR018				X				X	
3FR003							X	X	
3FR157					X		X		
3FR023	X		X	X	X	X			
3CW63				X	X	X			

Abbreviations: SH = shell, CL = clay, Arg/slt = argillite/siltstone, S/H = spades/hoes, R = round, P = pointed, W = Williams, WB = Williams B

When the temporally diagnostic artifacts are plotted by site, a fairly consistent distribution can be seen, implying a stable environment, at least in terms of landform creation, over much of the period of occupation represented by the collections. Comparing the earliest (Bulverde projectile point/knives) and the latest (shell-tempered ceramics, arrow points) markers, however, we can see a boundary for the presence of the chronologically earlier material, running from the north edge of the abandoned channel (Vine Prairie Lake) to Mulberry Creek near 3CW695.

The absence of early markers south of this line, and the presence of later ones (cf. 3CW31) indicate that this may be the most recent landform available for prehistoric use within the study area. The absence of prehistoric cultural material south of the natural levee/cutbank which runs from 3CW695 southwest to the present Arkansas River channel suggests it is a recent, historic period, deposit.

This evidence suggests that the river channel has been systematically moving in a southerly direction leaving behind a relatively intact system of alluvial deposits. These deposits contain cultural materials thought to comprise a portion of the archeological record of human occupation and use spanning more than 4,000 years. Sites such as 3CW32 which contain both early and late chronological markers would seem to indicate surfaces of stability at these locations throughout this process. The absence of early and middle Archaic presence in the study area may mean that there are no intact landforms from that period, at least none with surface manifestations. If the general southern trend in the channel movement is accurate, these landforms would logically be located to the north of the point bars above natural levee veneers, presenting the

possibility of buried sites. Soil core samples recovered from this area have not yet been fully interpreted, but it is hoped that information from these samples will shed some light on this topic.

All the sites visited or recorded during this project showed signs of impact from current use, mainly erosion from agricultural practices. Sites affected by cutbank erosion include 3CW695, 3FR001, and 3FR023. Site 3FR023 is on the active Arkansas River channel and is currently undergoing erosion from this source. This site is on its way downstream, and some form of data recovery may be the best treatment of the situation.

As discussed in other parts of this report, the study area's potential as a research laboratory for conducting investigation of human use of the Arkansas River Valley can clearly be considered to be significant but is not fully understood. It appears to be one of the very few places still remaining within the presently active Arkansas River floodplain in which such a chronologically extensive archeological record can be found. As such it offers the potential for the study of human adaptation to a changing riverine environment over several thousand years.

It is our judgment that the significance of this location can not be appropriately measured on a site by site basis. Rather the entire locality should be considered potentially significant, perhaps as a historic district. It is therefore our recommendation that formal evaluation efforts, stressing subsurface investigations, be undertaken in this area. This work should be guided by a carefully designed program of research identifying both questions and data sets needed to address those questions which takes into consideration the results of previous investigations elsewhere in the Arkansas River Valley of western Arkansas and eastern Oklahoma.

PART II
ARCHEOLOGICAL SITE EVALUATION
IN THE
ILLINOIS BAYOU AREA
LAKE DARDANELLE, ARKANSAS
by
W. J. Bennett, Jr.

INTRODUCTION

Project Authorization

Under the authority of and in compliance with the National Historic Preservation Act of 1980 (Public Law 96-515) and other authorities, the U.S. Army Engineer District, Little Rock (USAED,LR), contracted with Archeological Assessments, Inc. (AAI), Nashville, Arkansas, for the performance of site evaluation investigations at four sites (3PP255, 3PP258, 3PP259, 3PP262) in the Illinois Bayou area of Lake Dardanelle, Arkansas. These investigations were undertaken as part of Contract No. DACW03-86-D-0068, Order No. 12.

Project Area Location

Lake Dardanelle is a part of the McClellan-Kerr Navigation system. It is located in west-central Arkansas (Figure 34) between the towns of Russellville and Ozark on the Arkansas River. Illinois Bayou is a major tributary to the Arkansas River flowing into the Arkansas River from the north near the town of Russellville. Most of the landforms created by Illinois Bayou near its confluence with the Arkansas River are now inundated by Lake Dardanelle.

The sites investigated are all located on alluvial structures approximately four miles upstream from the confluence of Illinois Bayou with the Arkansas River (Figure 35). Three sites are situated on a landform designated by Smith (1986) as a tributary fan. Sites 3PP258 and 3PP259 are situated near the west bank of Illinois Bayou while 3PP262 is situated on the east bank. Site 3PP255 is located on a tributary terrace of Illinois Bayou on the eastern bank of an abandoned channel.

Project Goals and Orientation

These four sites were recorded as part of a reconnaissance level survey of Lake Dardanelle conducted in 1985 (Bennett et al. 1986). At that time investigations indicated the possibility of subsurface and/or intact deposits at these locations. The findings suggested that these sites might well contain information regarding the pre-Euro-American occupation of the area. Thus investigations were undertaken to document further the archeological record at these sites and to evaluate them under criteria developed for the inclusion of such properties in the National Register of Historic Places as stated in 36CFR60.4:

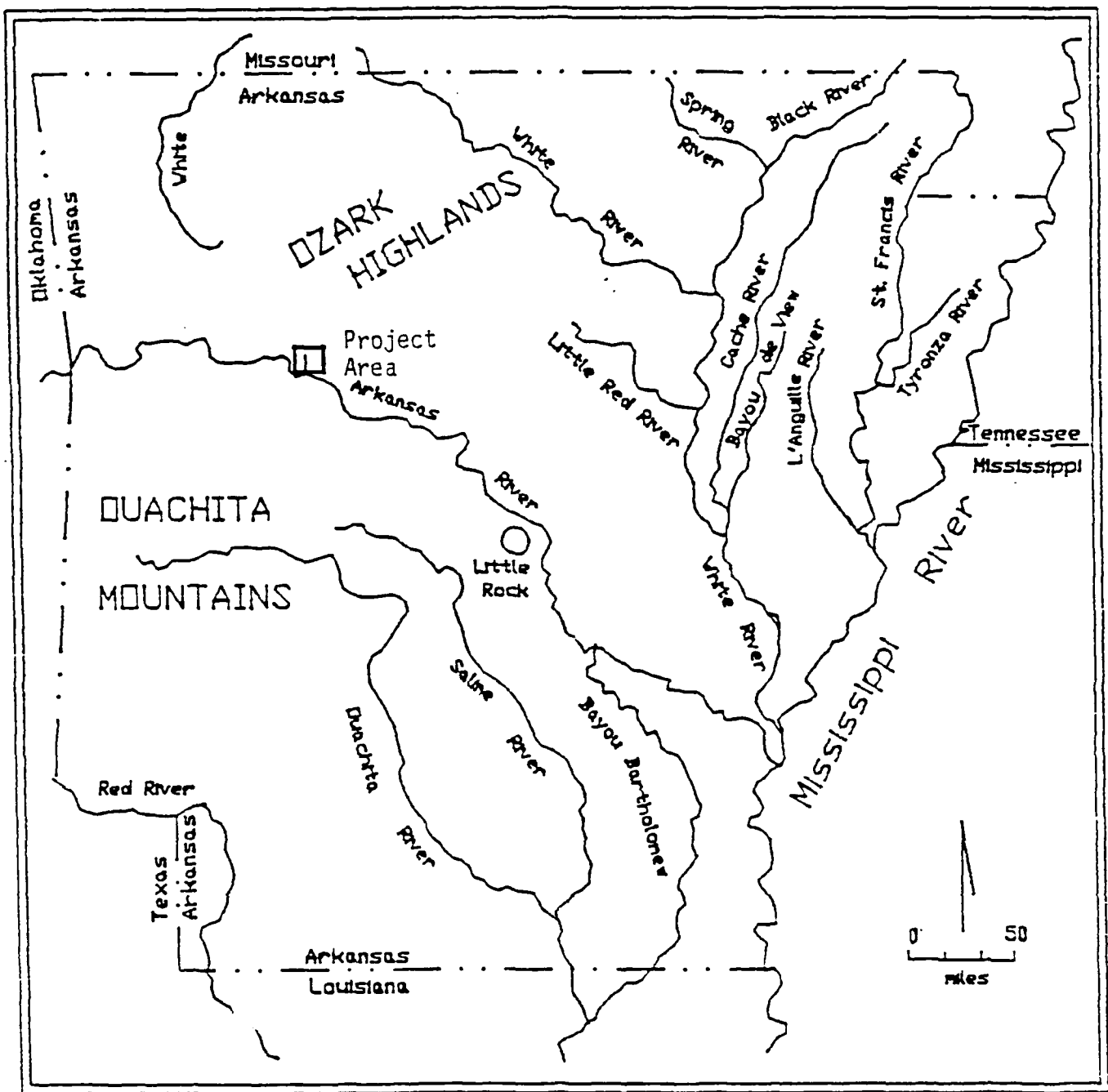


Figure 34. General Vicinity Map

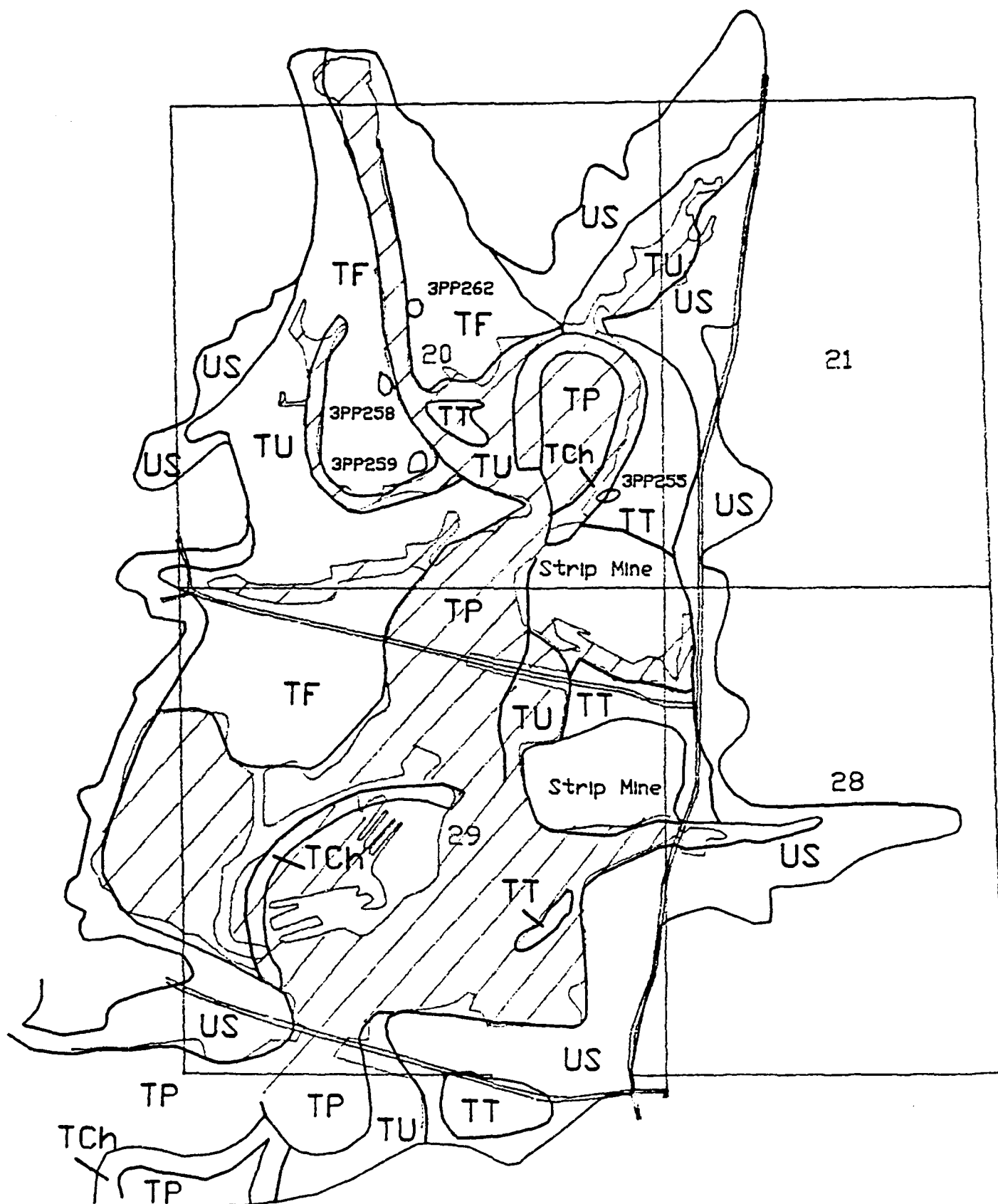


Figure 35. Location of Landforms and Sites Tested on Illinois Bayou

MAP LEGEND



Illinois Bayou Boundaries



Landform Boundaries

TCh Abandoned Tributary Channel

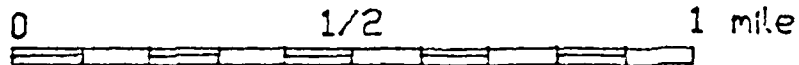
TF Tributary Alluvial Fan

TP Tributary Pointbar

TU Undifferentiated Tributary Floodplain

TT Tributary Terrace

US Upland Slope



The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or (d) that have yielded, or may be likely to yield, information important in prehistory or history.

In terms of the sites considered in this project, Criterion D is the one almost universally applied. In applying the criteria stated above the crucial consideration is whether the site in question still contains intact deposits. Thus an important consideration in these investigations was the determination of the presence (or absence) of intact deposits at each site. It is, however, recognized that in some rare instances sites whose integrity have been seriously compromised can still yield significant information about certain periods.

An initial attempt has been made to formulate particular aspects of importance bearing on the issue of site significance for cultural resources in Arkansas (Davis 1982). Unfortunately, the section of this work related to the Arkansas River Valley is lacking in such guidelines. However, suggestions offered for sites in the Arkansas Ozarks may be considered for possible application to the sites involved in these investigations. These are considered at the conclusion of the archeological context section of this report.

Given the clear importance of intact deposits within this process of evaluation particular emphasis was given to the documentation of the stratigraphic situation at the particular sites investigated. Indeed, it was primarily on the basis of subsurface deposits that these sites were thought potentially to be significant. The materials recovered from their initial examination were neither particularly distinctive or diagnostic nor were they extensive.

Thus the primary focus of these investigations was to determine the presence of intact cultural deposits at these locations and to gather a more extensive and better controlled sample of artifacts from these sites.

SUMMARY OF INVESTIGATIONS

Field Investigations

Field investigations were conducted from August 16 to August 23, 1987. Investigations were directed by W. J. Bennett, Jr., assisted by Mary Bennett, John Northcutt, John Northrip, and Robert Abbott. James Hoelscher served as Project Soils Scientist and Robert Stewart conducted paleo-botanical investigations.

Field activities included the extraction of solid soil cores using Archeological Assessments' Bull Soil Sampler, the excavation of subsurface tests of various sizes (shovel tests of 30cm in diameter) to test units measuring 3 x 3m. Selected matrix samples were subjected to water-separation methods (water screening and flotation).

The primary goals of the field investigations were to document the stratigraphy of the sites and to recover a sample of materials in order to determine if the archeological record at these sites held potential for yielding significant information about those human groups which created them.

Laboratory Analyses

All recovered materials, with the exception of the botanical samples, have been cleaned and catalogued for curation with the University of Arkansas Museum, Fayetteville (Accession Numbers: 3PP255 - 88-60, 3PP258 - 88-61, 3PP259 - 88-62, 3PP262 - 88-63).

Artifact descriptions were done by Christine Cojeen. Lithic materials were classified as either artifacts, flakes, or debris. The category of artifact includes lithic items which can be recognized morphologically as tools (e.g., dart points) or which show evidence of attempts to shape them into tools (e.g., cores) or which show evidence of use as a tool (e.g., edge damage).

Flakes are variously shaped lithic items detached from larger object pieces. Each flake was described according to size (Figure 36), presence or absence of cortex (a = absent; p = present), type of cortex (ps = stream-rolled; pq or pw = weathered, outcrop, or quarry), presence or absence of platform, type of platform (pf = faceted; pw = worn or rounded), and evidence of post-detachment modification.

The category of debris included any blocky material which did not display post-detachment modification or evidence of having served as an object piece.

Prehistoric ceramics were described in terms of macroscopically observable temper, surface finish, and decoration.

Analysis of the botanical materials was done by Dr. Robert Stewart, Sam Houston State University, Huntsville, Texas. A total of 34 matrix samples, averaging 20 liters per sample, were examined.

Chemical and textural analyses were performed for six soil samples by A & L Agricultural Laboratories, Memphis, Tennessee.

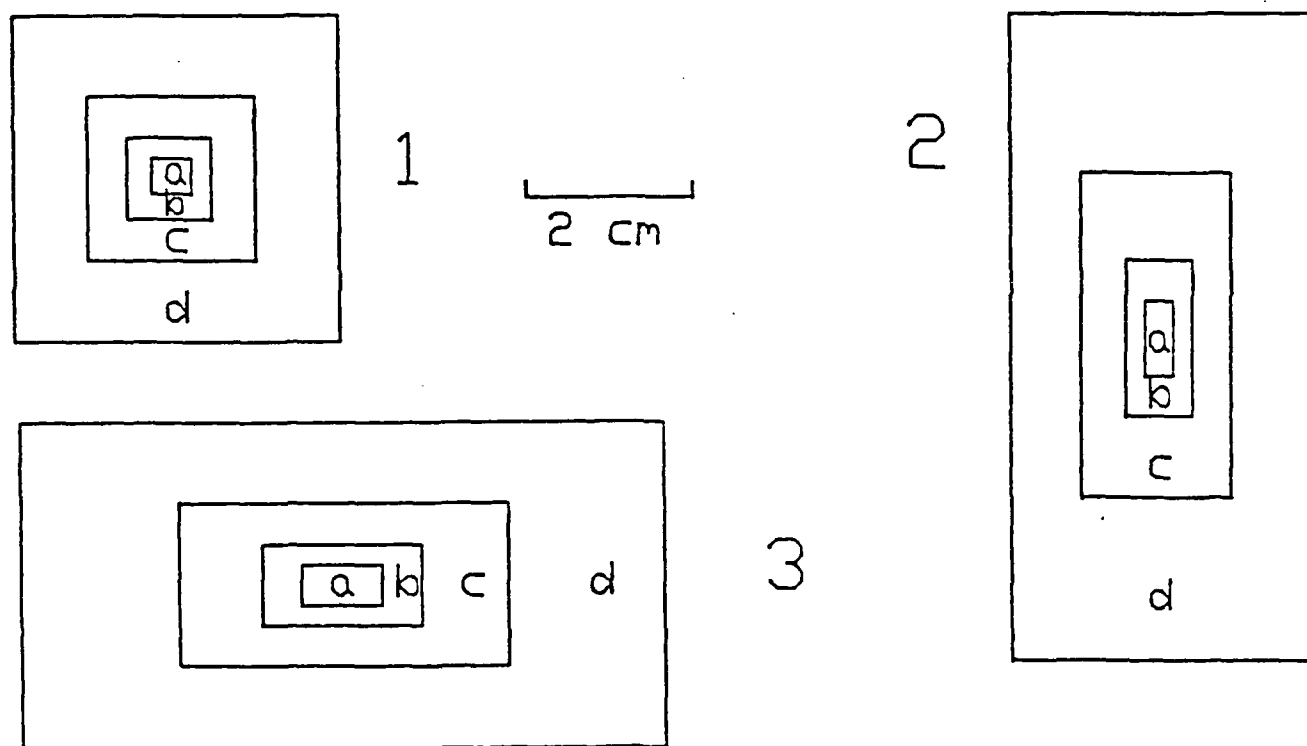


Figure 36. Flake Size Chart.

ARCHEOLOGICAL CONTEXT

Previous Archeological Investigations

In his "Summary of Archaeology" for the Lake Dardanelle area Robert Greengo (1957: 18,19) wrote:

"The middle Arkansas Valley lies between two late prehistoric culture climaxes in the south-central United States. To the east were the "Mississippian" peoples along the great river, who are known especially for the large temple mounds they built and for the variety of pottery-vessel forms they made. To the west and south were the peoples responsible for the Gibson Aspect and Fulton Aspect cultures of the Caddoan Area. That these cultures bore some relationships to the Mississippian culture area is indisputable, but the nature of these relationships is a most enigmatic and important problem. Situated as it is, between these climax cultures, the middle Arkansas Valley is an area that may well hold the key to the answers of some of the most baffling questions. While the region has been visited from time to time by professional archeologists, the Dardanelle Reservoir area and the region around it have not been touched by the spade of a trained man carrying out stratigraphic excavation."

The situation today is only very slightly changed from Greengo's time. Beyond the testing of five sites (3PP1, 3PP13 [which failed to yield any artifactual materials], 3PP20, 3LO4, and 3YE3) done by Warren Caldwell (1958) as a follow-up to Greengo's survey, only two other sites (3JO242 and 3LO13; Taylor and Spears 1987) in the Lake Dardanelle area have been examined in any detail. No data recovery investigations have been conducted at any locations within the vicinity of Lake Dardanelle. Nor is the situation appreciably different for the larger region.

It is fair to say that while the number of site location efforts within the Arkansas River Valley from Fort Smith to Little Rock have increased both in quantity and quality in the past 30 years, archeologists have gathered precious little data, other than that gained by the examination of surface materials, about the nature of the perhaps 10,000 year history of human occupation of the region. In fact, there has been only one site stratigraphically excavated within the entire Arkansas Hill and Valley Belt. That is the Sliding Slab Shelter (3SB29) west of the town of Booneville (Harden et al. 1981). Thus, in terms of rigorous archeological investigations not much more is known about the region than was known after Moorehead (1931) and Harrington (1924) first brought the extent of the archeological record (and what was being lost from it) to public attention. Convenient summaries of these archeological investigations are found in Bennett et al. (1986) and Sabo et al. (1986).

As a result, present interpretations of the history of human use of the area are based upon data gathered from investigations conducted elsewhere

in the Arkansas River Valley, primarily from investigations within Oklahoma, and from investigations at a number of bluff shelters within the Ozark Mountains, particularly in the upper White River area of what is now Beaver and Table Rock lakes. It is clear, however, that much of what is asserted regarding the changes which are thought to have taken place in this region is based on the findings of the amateur excavations undertaken at the Tom's Brook Shelter (Bartlett 1963) in Johnson County.

The Regional Context

Drawing upon these sources, recent investigators (Bennett et al. 1986; Sabo et al. 1986) interpret the pre-Euro-American occupation of the region within four culture-historical divisions: Paleo-Indian, Archaic, Woodland, and Mississippian. While investigators are primarily concerned with the identification of 'index fossils' to be used in defining the various culture-historical periods (or suggested chronology) some suggestions have been offered regarding changes in patterns of social and economic life over the last several thousand years.

The following is a brief discussion, following Bennett and Watkins (1987) of what can be said about the social and economic patterns in the region.

Occupation in the region is thought to have begun at the end of the Pleistocene period about 12,000 B.P. This occupation is thought to have been composed of small highly nomadic bands of hunters and gatherers. Very little is known about this regional occupation, usually designated Paleo-Indian and recognized by the distinctive Clovis and Folsom fluted lanceolate projectile points. Although no sites of this period have been identified, these diagnostic items have been located in the region. Davis (1967: 2) illustrates a Clovis point from Logan County and a possible such point was recovered from 3J0089 in Johnson County (Heartfield, Madden and Price 1985: Figure 2-4:e; 2-5:g).

Materials diagnostic of what is likely to have been the last phase of this occupation (the Dalton period) are well-documented in the region, but again, no sites have been excavated. Taylor and Spears (1987) report the find of the distinctive Dalton point form in test excavations at 3L013. Such points have been dated to approximately 9,500 B.P. on the basis of stratified materials and Carbon 14 tests at the Rodgers Shelter in western Missouri (Kay 1982).

Following this period, there is little solid evidence of occupation of the region until about 4,000/5,000 B.P. Beginning in what researchers usually call the Late Archaic, there seems to have been a considerable human occupation of the region judging by the numerous finds of particular dart point forms, primarily the corner-notched forms. There is some slight evidence for human occupation prior to this in the form of side-notched points similar to that called the Big Sandy type and expanding stemmed points including the Johnson point. Both of these point types were recovered from the lower levels of the Tom's Brook

Shelter. However, the presence of these forms in stratified or other secure proveniences is rare as are surface finds of these artifacts.

From the third millennium B.C., however, there seems to have been a steady and fairly dense population in the region. There is considerable evidence, primarily from surface finds, of an extensive Woodland population, called Fourche Maline, for which contracting stem (Gary) projectile points, thick grit or grog-tempered ceramics, and siltstone hoes are important markers. The Spinach Patch site near Alma, Arkansas, is thought to have been an important Fourche Maline center (Bond 1977).

The last pre-Euro-American occupation of the region is a part of the Mississippian culture-historical unit. Such Mississippian groups are thought to have been largely sedentary with an economy focused on the cultivation of maize, beans, and squash. A major question is, as Greengo stated it in 1957, whether these groups were part of the Caddo documented for the western Arkansas River Valley or a part of the lower Mississippi Valley groups or something distinct. A large body of material from this occupation was looted from the Carden Bottoms area at the time of the 1927 flood (Harrington 1924). The University of Arkansas Museum subsequently acquired a considerable collection of these materials and Clancy (1985) is a detailed study of this collection. This study presents a description of the museum collection in terms of ceramic types previously formulated for the Caddoan and Lower Valley regions. Clancy (1985: 244-245) concludes that these materials belong to the Carden's Bottom phase thought to have been present in the Middle Arkansas River Valley from about 1350 to 1650 AD. The extent to which the Quapaw groups present in the lower Arkansas River Valley at the time of French exploration in the 17th century also occupied the western part of the Arkansas River Valley is not known (Hoffman 1985).

Finally, we reference the early 19th century resettlement of members of the Cherokee tribe in this area. The Dwight Mission which was an important early 19th century institution was situated along the western edge of the floodplain of Illinois Bayou and settlement associated with this facility extended into the floodplain proper (Park 1955).

The Illinois Bayou Area

During his survey Greengo recorded 19 sites in the Illinois Bayou area, all downstream from the sites investigated in this effort (Table 2).

Although there are no detailed descriptions of materials recovered from these sites and none are illustrated, Greengo does provide a general description of the artifact types present. These include projectile points, flakes, pitted stones, manos, hoes, and ceramics.

Table 2. Illinois Bayou Sites as Described in Greengo (1957)

Site	Description
3PP1	Rock Shelter
3PP2	Workshop-Camp
3PP3	Workshop-Camp
3PP4	Workshop-Camp
3PP5	Workshop-Camp
3PP6	Workshop-Camp
3PP7	Workshop-Camp
3PP8	Workshop-Camp
3PP9	Workshop-Camp
3PP10	Workshop-Camp
3PP11	Possible Village
3PP12	Workshop-Camp
3PP13	Workshop-Camp
3PP14	Workshop-Camp
3PP15	Workshop-Camp
3PP16	Workshop-Camp
3PP18	Workshop-Camp
3PP19	Workshop-Camp
3PP20	Possible Village

Caldwell's report of excavations at 3PP1 gives greater detail about the materials recovered from that site. This site is a small bluff shelter in the uplands only a few 100s of meters from the Illinois Bayou floodplain. Details of the excavation methods are not presented and data related to the sedimentary context and stratigraphic position of materials are lacking. Caldwell does, however, present a summary of the recovered materials which he divides into three assemblages (Caldwell 1958: 32,33).

(1) Preceramic component (below 4.5 feet)

Artifacts in this assemblage included corner-notched and side-notched dart points, flake scrapers, blades, hammerstones, manos, and ovate knives.

(2) Lower ceramic component (1.5 feet to 4.5 feet?)

Artifacts in this assemblage included a number of ceramics, predominantly clay-tempered but with some sand-grit tempered, contracting stem projectile points as well as dart points with wide corner notches, deep side notches, and many single examples of stemmed and side-notched points. Other artifact groups included retouched scrapers, irregular flakes, blades, many hammerstones and manos, triangular and ovoid knives, and a number of bone items including an uina awl, flaker, and punch; a splinter awl; a tubular

bead; an antler tine punch and flaker; and a perforated mussel shell and a univalve bead.

(3) The upper ceramic component (surface to 1.5 feet)

This component was composed of shell-tempered pottery in greater quantity than clay and sand-grit tempered pottery and a few projectile points. Other artifacts included irregular flake scrapers, many hammerstones, an increase in number of pitted manos, an ulna awl, bone tube, beamers, an antler tine flaker, a mussel shell scraper, and slotted columnella.

A few of the ceramics are illustrated including a large sherd with "boldly engraved" circular designs which Caldwell thought were similar to Caddoan designs.

A total of 12 of the recovered projectile points are illustrated by Caldwell (1958: Plates 5 and 6). These include both contracting stem and corner-notched examples. No examples of points presently thought to be earlier than 4,000/5,000 B.P. are illustrated from this site although one Big Sandy point, from 3L004, is shown (Caldwell 1958: Plate 6j). Arrow points are not reported from 3PP1.

In interpreting these materials within the general regional framework outlined above, it seems that the work of Greengo and Caldwell indicate an occupation of the Illinois Bayou area from the Late Archaic through the Mississippian Periods.

Context of Significance

As indicated above Davis (1982) has made an initial attempt at identifying issues which would assist in determining significance. For this reason we quote at length from this section of Davis (1982).

Regarding sites from the Paleo-Indian periods Davis (1982: OP21) states,

Any evidence of Paleo-Indian occupation can be considered of importance, although a single fluted point would not necessarily make a site eligible for the National Register without more associated information. In addition to the potential for answering any of the general research questions, particular emphasis should be placed on potential for environmental reconstruction at this time period. In situ undisturbed evidence of Paleo-Indian occupation would make a site eligible, but evidence that would allow dating the occupation or provide environmental information should be considered especially significant.

For the Archaic periods Davis (1982: OP22) states

Any evidence that can aid in refining the adaptations and nature

of changes in lifeways of these Study Units, either through time or in the three physiographic zones can be considered significant. Excellent and complete samples of tools from disturbed contexts will aid in defining the artifact assemblages and possible tool functions. Good undisturbed deposits, particularly ones with good faunal and floral preservation, will be especially important. Both these kinds of sites would be considered eligible for the National Register.

For the Woodland Period the following comments are offered (Davis 1982: OP23):

Good artifact assemblages, whether from disturbed contexts or not, which can aid in refinement of physiographic differences and adaptations to the practice of horticulture, should be considered of special importance. Sites that also have undisturbed deposits of Woodland period occupation would also be considered eligible for the National Register. Preservation of environmental information and evidence which could be used for absolute dating should be considered vital to definition of these Study Units.

For the Mississippian Period the following comments are offered (Davis 1982: OP24):

Good artifact assemblages even from disturbed contexts will aid in definition of adaptations and functions of sites in the Ozarks from this time period, and should be considered important. Sites with undisturbed deposits, particularly with features such as houses or pits, should be considered especially significant, although both disturbed and undisturbed sites can be considered eligible for the National Register. Deeply stratified sites, both bluff shelters and bottomland sites, will be vital to definition of these and earlier Study Units, with respect to general culture change processes, changes in population density, and with presumed increased dependence upon cultivated crops.

While these issues clearly do not exhaust every possible question regarding the pre-Euro-American occupation of the area they are judged to be an appropriate general statement regarding the present interests of researchers in the area.

SITE DESCRIPTIONS

Site 3PP255

Original Observations

Site 3PP255 is located on the eastern side of Illinois Bayou on a landform mapped as Tributary Terrace by Smith (1986). At the time of investigations the site was in pasture except for trees growing along the water line (Figure 37).

As originally described this site was thought to be a rather small (40 x 60m) scatter of lithic materials with the possibility of subsurface deposits. The initial investigation of 3PP255 at the time of discovery included an intense surface examination and the excavation of 29 shovel tests at 10m intervals across the site. Of these 29 shovel tests, 14 yielded cultural materials including flakes (11 chert flakes and one quartzite flake, three of which were thought to be modified) as well as three ground and pecked quartzite and siltstone artifacts (Bennett et al. 1986: 113, II-92). Materials were generally restricted to a low rise with an east/west orientation.



Figure 37. Site 3PP255. View to the west.

Field Strategy and Techniques

Since the site had previously been subjected to the systematic excavation of shovel tests at 10m intervals, areas of artifact density could be projected. A systematic surface examination was, however, conducted to determine if any other areas of artifact concentration could be discerned at this time. The surface examination failed to identify any other areas of artifact concentration.

A program of soil coring was conducted which involved the extraction of 23 solid soil cores to a depth of 125cm. A total of three Test Units were excavated at the site. The location of these subsurface tests is shown in Figure 38. Test Units 1 and 3 measured 1 x 0.5m and Test Unit 2 measured 1 x 1m. These were placed in areas of both high and low artifact density as determined in the original shovel tests. All units were excavated well into the B horizon of the upper sedimentary unit. Soil was sifted through 1/4-inch hardware cloth. No matrix samples were floated from 3PP255.

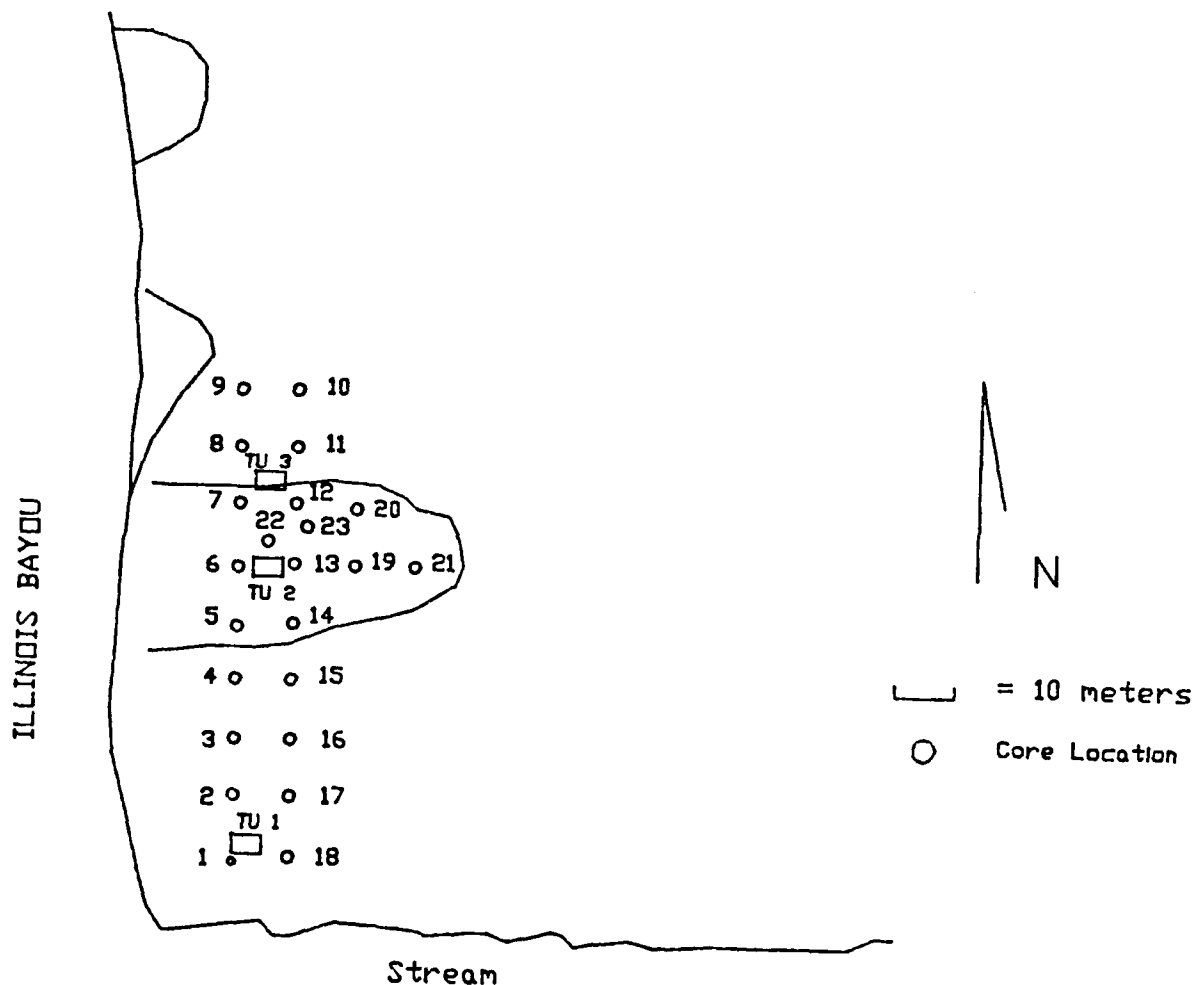


Figure 38. Sketch Map of 3PP255.

Site Stratigraphy

The profile of Core No. 23 (Figure 39) is representative of the natural stratigraphy at the site. This shows an upper sedimentary unit to a depth of nearly 1m. This unit consisted of a single solum which exhibited a very well-developed soil. The upper 10-20cm was composed of a very fine sand Ap unit. Within several of the soil cores and test unit profiles the mixing of the A₁₂ with the lower A₂ (E) horizon was apparent. The shallowness of the A horizon suggests this surface has been subjected to a considerable amount of erosion, probably associated with Euro-American agriculture.

Below the Ap was a very well developed argillic B horizon consisting of a B₂₁ (strong brown silty clay loam) with an underlying B₂₂ (yellowish brown silty clay loam). Both of these pedologic units were easily recognized in the various cores and test units.

The lower sedimentary unit contained a thin A' horizon (pale brown very fine sandy loam) overlying a very well-developed B horizon (strong brown silty clay loam) to a depth of 120cm, below which the core could not penetrate.

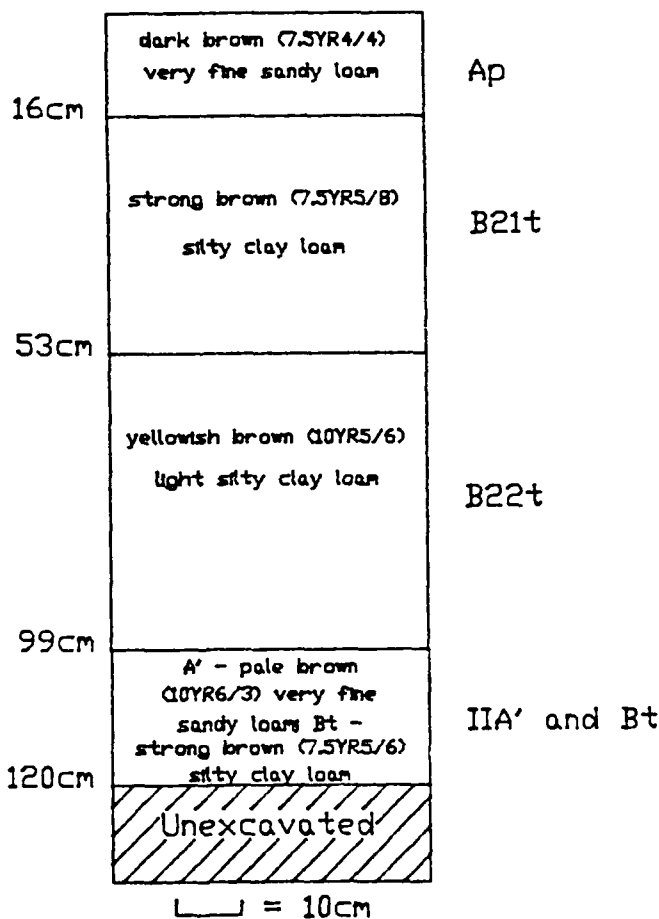


Figure 39. Site 3PP255, Core No. 23 Profile.

Recovered Materials

Cultural materials recovered from the site were extremely sparse and consisted entirely of lithic debris: a total of 44 flakes and 12 tools and/or tool fragments (Table 3). No materials diagnostic of particular cultural periods were recovered.

The recovered materials were restricted to the upper 30cm of the site; basically the A horizon of the upper sedimentary unit. Judging from the amount of soil development in both the upper and lower sedimentary units, it is unlikely in the extreme that cultural materials are present in the lower sedimentary unit.

The lithic debris recovered from 3PP255 seemed to be the result of biface manufacture or maintenance as exhibited by the biface fragments and numerous flakes. The raw material was predominantly chert but with a few novaculite items. Several of the chert flakes exhibited stream cortex which would suggest the use of locally available stream pebbles or cobbles. Only one novaculite flake, however, retained any cortex. Since novaculite is not thought to occur naturally in the local streams (or to occur rarely) it is possible that the lithic industry used materials derived from the novaculite sources of the Ouachita Mountains south of the Arkansas River.

In addition to the materials related to biface manufacture, a number of ground stone tools and tool fragments were recovered which suggests the possible processing of flint materials at the site.

Table 3. Recovered Materials from Site 3PP255.

FLAKES

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
Test Unit 1	00-10	4	cht	-	a	a	
	10-20	1	cht	-	a	a	
	10-20	1	cht	-	a	a	block shatter
	10-20	2	cht	-	a	ps	
	10-20	2	nov	-	a	a	
	10-20	3	q/s	-	a	ps	
	20-30	1	c/n	-	a	a	
	20-30	3	c/n	-	a	ps	
	20-30	2	cht	-	a	ps	
	20-30	2	nov	-	a	a	
	20-30	1	nov	-	a	ps	
Test Unit 2	20-30	3	cht	-	a	a	
	20-30	1	cht	-	pf	a	

Table 3. Recovered Materials from Site 3PP255.
(continued)

FLAKES (cont'd)

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
Test Unit 3	00-20	4	c/n	-	a	a	
	00-20	6	cht	-	a	a	
	00-20	2	cht	-	a	ps	
	00-20	2	nov	-	a	a	
	00-20	1	nov	-	pf	a	
	20-30	1	cht	-	a	a	
	20-30	2	nov	-	a	a	

TOOLS

Provenience	Depth	Material	Cortex	HF	Description
Test Unit 1	00-10	cht	a	a	dart point, broken
	00-10	cht	p	a	unidentified biface fragment
	00-10	qtz/sst	ps	a	mano fragment
	00-10	qtz/sst	p	a	metate fragment?
	00-10	qtz/sst	p	a	unidentified groundstone fragment
	10-20	qtz/sst	p	a	unidentified groundstone fragment
	10-20	qtz/sst	p	a	unidentified groundstone fragment
	20-30	c/n	ps	a	broken flaked cobble
Test Unit 2	20-30	cht	a	a	unidentified biface fragment
	20-30	cht	a	a	unidentified biface fragment
Test Unit 3	00-20	qtz/sst	p	a	unidentified groundstone
	20-30	nov	a	a	unidentified biface fragment

Summary

Investigations at 3PP255 indicate that it consists of a rather sparse scatter of lithic debris. Materials are restricted to the upper portions (30cm or so) of the site. The areal extent of the artifact scatter is approximately 40m by 60m as originally estimated.

Recovered materials were judged to be from the manufacture (and maintenance?) of bifacial tools and, perhaps, the processing of floral materials. No materials diagnostic of specific cultural periods were discovered.

Site 3PP258

Original Observations

Site 3PP258 is located just west of Illinois Bayou on what was judged to be a Tributary Fan by Smith (1986). At the time of investigations the site was in pasture bordered by a tree line to the east (Figure 40).

At the time of discovery this site was described as a rather small site (35 x 50m) with materials recovered to approximately 50cm. Seven of the 12 shovel tests placed in the site recovered cultural materials. Recovered materials included six chert flakes (two which appeared to be modified) as well as four ground and pecked siltstone items (Bennett et al. 1986: 113, II-95).



Figure 40. Site 3PP258. View to southeast.

Field Strategy and Techniques

Investigations at this site included the excavation of Test Units and the extraction of solid soil cores. Two test units were excavated (Figure 41). Test Unit 1 measured 1 x 1m and was excavated to a depth of 90cm. Test Unit 2 measured 1 x 2m and was excavated to depth of 70cm. Soil was sifted through 1/4-inch hardware cloth. A single matrix sample (ca. 10 liters) was processed by flotation.

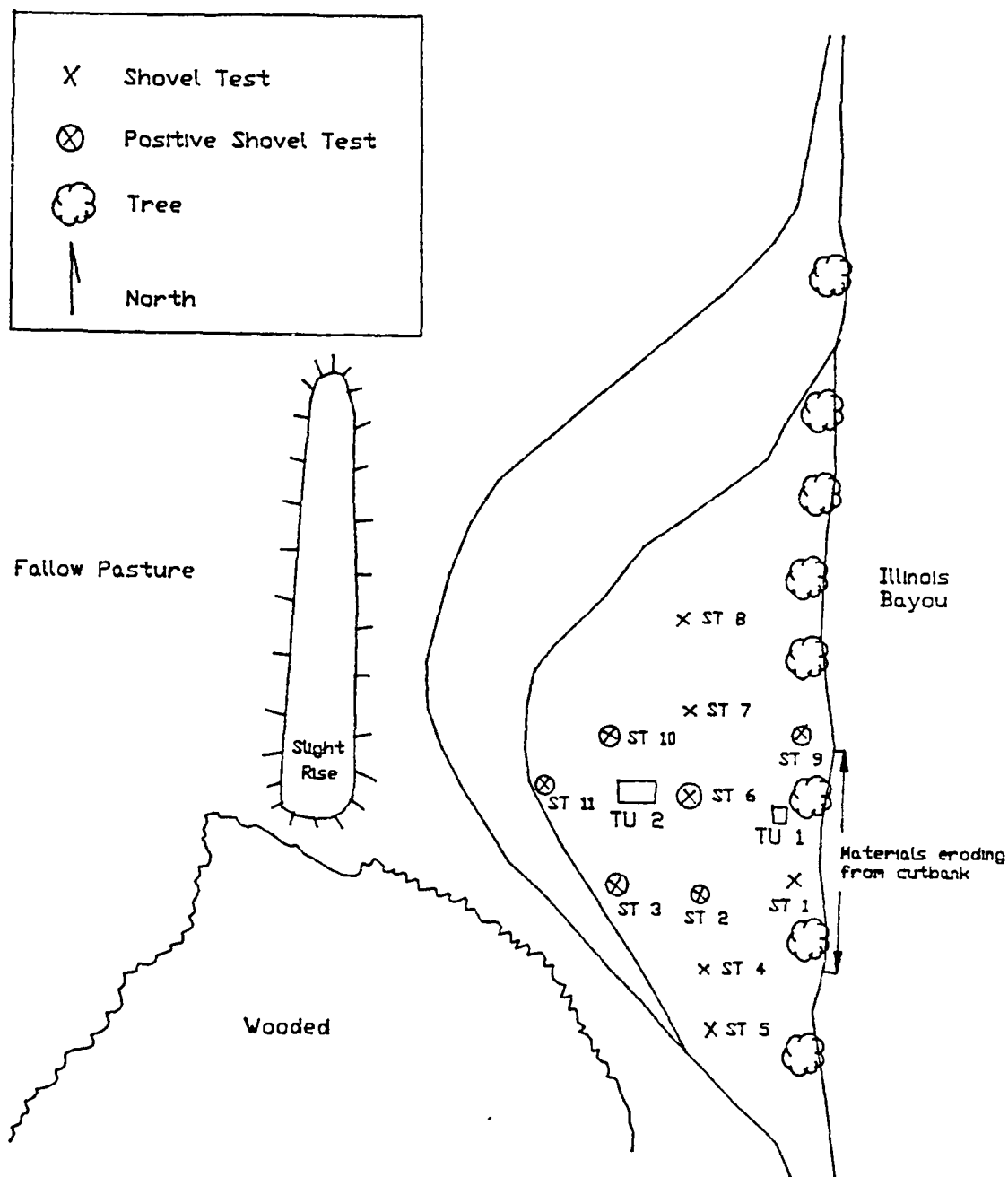


Figure 41. Sketch Map of 3PP258.

Stratigraphy (Figure 42)

Soil profiles from this site indicate a highly dynamic landform. The stratigraphy in this portion of the Tributary Fan showed a very recent sedimentary unit (shown as the A-C solum in Test Unit 1) to a maximum depth of 37cm. This unit is judged to be very recent overbank deposits from Illinois Bayou. This recent alluviation covered a shallow deposit of fine sand within which soil development had progressed to the point of the development of a cambic B horizon. A third sedimentary unit which also contained a clear buried A horizon was noted at a depth of 57cm in Test Unit 2 and 90cm in Test Unit 1. This difference in depth is attributable to the relative thickness of the latest (upper) sedimentary unit.

We interpret this stratigraphic situation as follows. The upper sedimentary unit is very recent with its age doubtless measured in 10s of years and that the surface it covers dates to the 20th century. Judging from both the degree of soil development and the recovered artifacts (both prehistoric and historic) the age of the middle unit is thought most likely to be measured in terms of 100s of years. Since we did not investigate the lower unit, our estimate of its age is much less certain but we believe it likely that the age of this unit may also be measured in 100s of years.

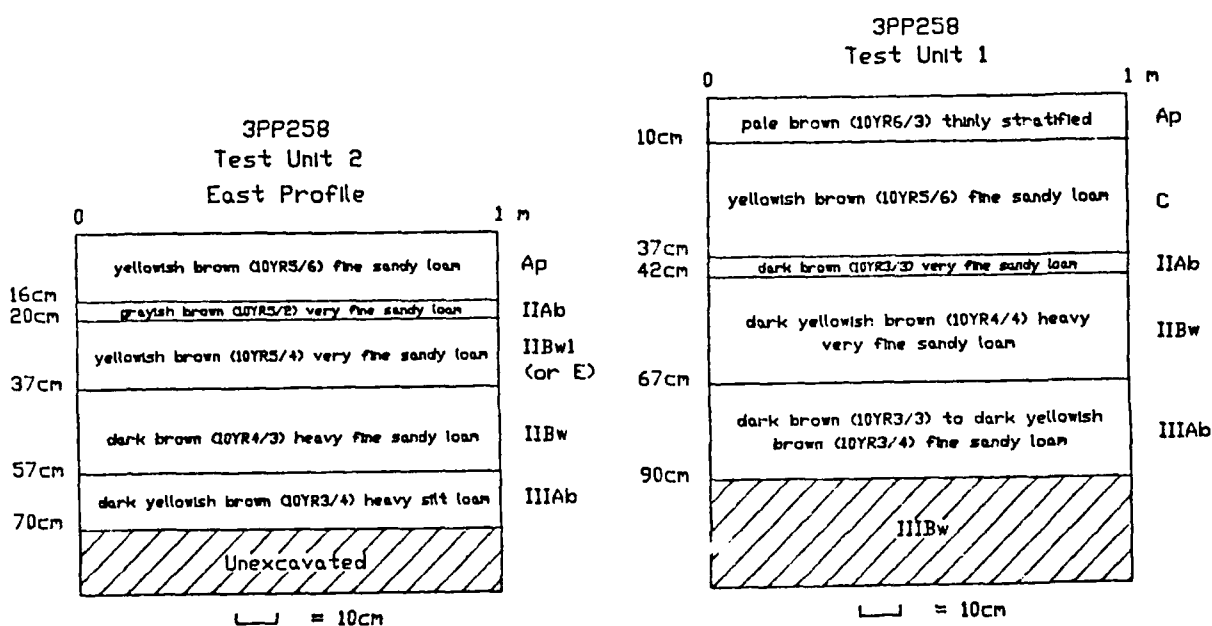


Figure 42. 3PP258 Test Unit Soil Profiles.

Recovered Materials

No prehistoric materials were recovered from the latest sedimentary unit. Materials were, however, recovered from all portions of the middle sedimentary unit as well as from the buried A horizon of the lower sedimentary unit. In Test Unit 1 both artifacts and fire-cracked rocks were observed within the lower buried A.

It would appear likely that to the extent investigated, 3PP258 contains prehistoric cultural materials from the late prehistoric periods in relatively unmixed contexts.

Prehistoric materials recovered from 3PP258 were sparse but rather homogeneous. A total of 16 flakes, 13 artifacts (of which 10 were ground stone items), and five plain, sand-tempered sherds (Table 4) were recovered.

The presence of chert flakes, four with stream cortex, suggests the manufacture of stone tools from locally available stream cobbles or gravel. The only bifacial tools recovered, however, were a rough stemmed dart point made from novaculite which was recovered from the stream cutbank at the edge of the site and an exhausted square-stemmed chert dart point from Test Unit 2. It is possible that biface manufacture at the site was undertaken to replace these items.

The stone tool inventory was composed almost entirely of groundstone items suggesting the processing of floral materials at the site.

A single matrix sample was processed from 3PP258. This was recovered from the lower buried A horizon (60-70cm deep) of Test Unit 2. This sample contained wood charcoal and a possible charred chenopodium seed. Nine specimens of burned bark were also recovered from this level during the excavation. The tree species could not be identified.

The dart points and the ceramics would seem to argue that the archeological record was created somewhere between 1000 and 1,500 years ago.

Table 4. Recovered Materials from Site 3PP258.

FLAKES

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
Test Unit 1	40-50	1	cht	-	a	a	
	50-60	1	c/n	-	a	ps	
	50-60	3	nov	-	a	a	
	50-60	1	und	-	a	a	
	60-70	1	c/n	-	a	a	
	70-80	1	cht	-	a	a	
	70-80	1	nov	-	a	a	

Table 4. Recovered Materials from Site 3PP258.
(continued)

FLAKES (cont'd)

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
Test Unit 2	00-50	3	cht	-	a	a	
	00-50	3	cht	-	a	ps	
	00-50	1	cht	-	pf	a	

TOOLS

Provenience	Depth	Material	Cortex	HF	Description
Cutbank		nov	a	a	unidentified biface/knife
Test Unit 1	40-50	qtz/sst	p	a	mano fragment
	60-70	cht	a	a	modified flake, utilized
	80-90	qtz/sst	p	a	mano fragment?
	80-90	qtz/sst	p	a	unidentified groundstone fragment
Test Unit 2	00-50	cht	a	a	square-stemmed dart point
	00-50	qtz/sst	p	a	nutting stone
	00-50	qtz/sst	p	a	mano
	00-50	qtz/sst	p	a	unidentified groundstone
	00-50	qtz/sst	p	a	unidentified groundstone
	00-50	qtz/sst	p	a	unidentified groundstone
	00-50	qtz/sst	p	a	mano fragment
	00-50	qtz/sst	p	a	groundstone?, broken

PREHISTORIC CERAMICS

Provenience	Depth	Temper	Description
Test Unit 1	70-80	sand	body sherd, possibly daub?
Test Unit 2	00-50	sand	body sherd, black int/ext
	00-50	sand	body sherd, black int/ext
	00-50	sand	body sherd, black int/ext
	59	sand	body sherd, brown int/ext

Table 4. Recovered Materials from Site 3PP258.
(continued)

HISTORIC ARTIFACTS

Provenience	Depth	Description
Test Unit 1	50-60	unidentified whiteware fragment
	60-70	green glass bottle fragment
	60-70	clear glass fragment

MISCELLANEOUS ARTIFACTS

Provenience	Depth	Description
Test Unit 1	70-80	2 pieces charcoal
Test Unit 2	59	3 pieces burned bark
	60-70	6 pieces burned bark

Summary

Stratigraphic observations made at 3PP258 revealed at least three sedimentary units. The uppermost, which was devoid of cultural materials where examined, was judged to be of very recent origin. The middle unit contained numerous prehistoric materials as did the A horizon of the lower unit. Although some mixing of materials was apparent, it seems likely that the archeological record of the middle and, perhaps, the lower sedimentary units contain relatively unmixed materials from a late (1,500 to 2,500 B.P.) prehistoric use of the area.

Site 3PP259

Original Observations

At the time of discovery, shovel testing at 3PP259 indicated a clustering of materials within an area of 25 x 60m. The site was situated in a small area of pasture adjacent to a wooded area (Figure 43). Four of the eight shovel tests placed within what was thought to be the site area recovered cultural materials to a depth of at least 30cm. Materials were restricted to a low rise running east and west. The recovered materials included three flakes and five ground stone fragments (Bennett et al. 1986: 113, II-96).



Figure 43. Site 3PP259 near Shovel Test 1. View to the south.

Field Strategy and Techniques

Site examination took several forms including the extraction of solid soil cores, the excavation of five Test Units (measuring 1 x 1m) in the southeastern corner of the landform, and the excavation of a line of screened shovel tests (50 x 50cm) along the crest of a slight ridge where materials had been recovered at the time the site was initially recorded (Figure 44). The placement of these units was decided on the basis of the distribution of materials observed at the time of site discovery and stratigraphy observed in the soil cores.

Excavation of the screened shovel tests involved the shoveling out of soil covering the buried A horizon with only random screening of matrix of these units. All soil from immediately above and including the buried surface was screened through 1/4-inch hardware cloth. The recovery of numerous artifacts in Shovel Test 5 led to the expansion of that unit to the dimensions of 1 x 1m.

Excavation of the test units also involved the shoveling out of the upper sedimentary unit above the buried A horizon with only random sample screening of matrix. All matrix from the buried A horizon and below was screened through 1/4-inch hardware cloth.

A total of 18 matrix samples were processed from 3PP259. In addition, two soil samples were taken from the site for textural and chemical analyses.

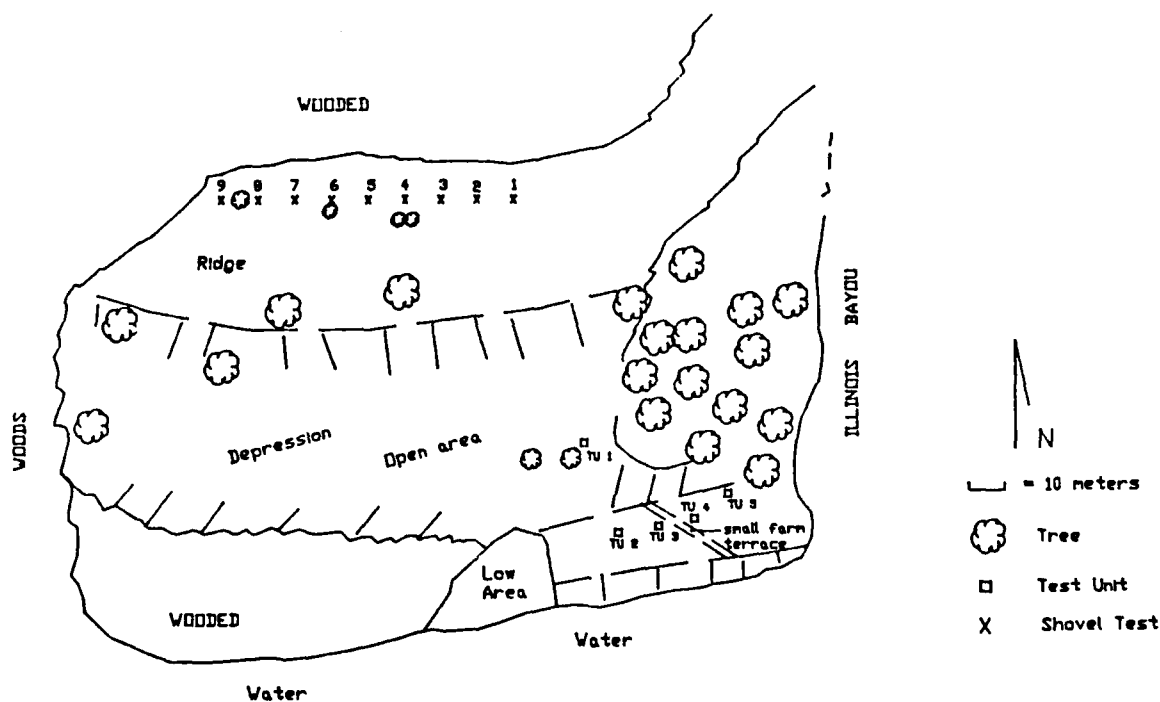


Figure 44. Sketch Map of 3PP259.

Site Stratigraphy

Figure 45 illustrates the observed stratigraphy in Core 1. It is only possible to describe the profile to a depth of 80cm because the lower portions were saturated. The core did reveal, however, two sedimentary units. The upper sedimentary unit was a deposit of very fine to fine sandy loam within which a weak but distinct soil had developed. Below this upper unit at a depth of 60cm was a deposit of silt loam with a clear buried A horizon.

Observations made of the profiles within the test excavations indicated the depth of a buried A to vary considerably. Along the line of the shovel tests, this horizon was found at about 30+cm and within the test units it was at 40+cm. It is strongly suspected that the deposits covering this buried surface may not be the same. The construction of a low terrace at the southern end of the site area (Figure 44) has modified this area considerably.

Two, separate soil samples were taken from the buried A found along the line of shovel tests. These were remarkably similar.

Table 5. 3PP259: Soil Chemistry and Texture

Location	% Sand	% Silt	% Clay	pH	% Organic
ST 1, 20-30cm	39	38	23	5.7	0.8
ST 5, 20-30cm	40	35	25	5.7	1.1

The phosphorus counts were less than 5 parts per million in each sample which rates them very low for agricultural soils.

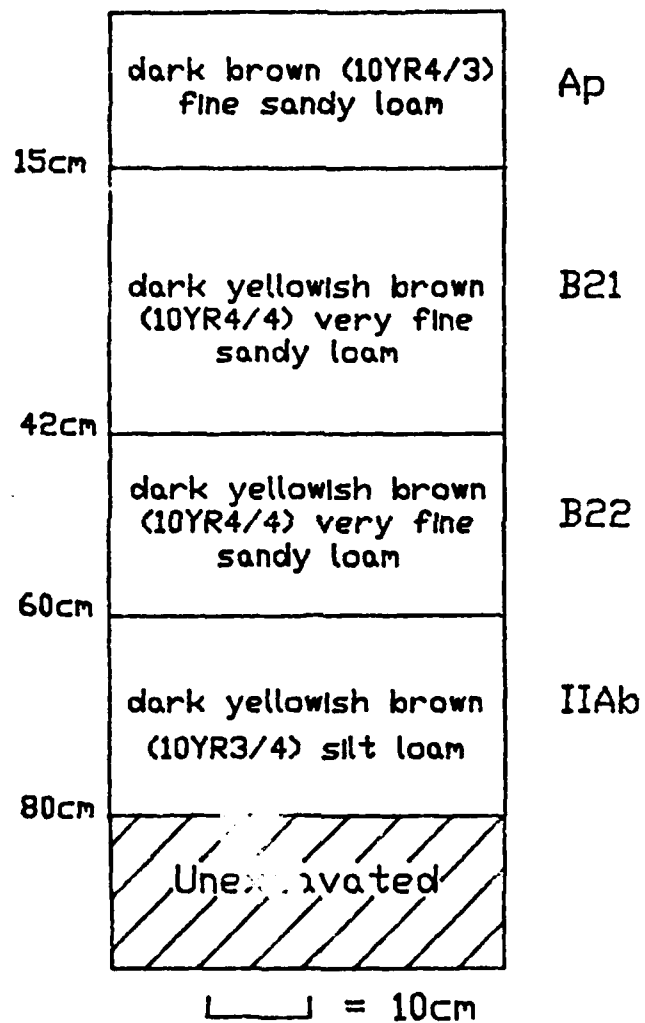


Figure 45. Site 3PP259, Core No. 1 Profile

Recovered Materials

Recovered materials included a total of 35 flakes (two of which were novaculite), 23 items which were classified as lithic tools, and one sand-tempered sherd.

The flake debris would again argue for biface manufacture using primarily local stream gravel (Table 6). However, only two bifacial items were recovered. The chert biface fragment recovered from the 30-40cm level of Shovel Test 5 is most likely from a dart point. The novaculite preform is clearly an item which was aborted during dart point manufacture.

With the exception of a modified chert flake the remainder of the tools recovered from the site were some sort of ground stone. The size and shape of these items varied considerably and not all items had clear evidence of use. A possible broken hoe was recovered from Shovel Test 5. What we assume to have been the bit end was heavily worn and the use of the piece as a digging implement seems likely.

Other than the single ceramic sherd no materials diagnostic of any particular cultural period was recovered.

A total of 18 matrix samples were taken from 3PP259. Fourteen of these yielded no botanical materials which were archeologically important. They either contained no seeds or seeds which had not been charred and were thus judged to be of very recent age. Four samples, however, did contain archeologically relevant materials. Charred chenopod seeds were recovered from the 30-40, 40-50, 50-60, and 60-70cm levels in Test Unit 1. A single acorn shell was also recovered from the 30-40cm level of this Test Unit.

While materials were recovered from the buried A horizon of the lower sedimentary unit, materials were also present in the upper sedimentary unit. The concentration of ground stone items in the upper sedimentary unit of shovel test 5 is difficult to interpret. These items were of various sizes and shapes and not all showed clear indications of use. Because of their stratigraphic location we doubt seriously if these are in situ. It is quite possible that these represent a secondary clustering of materials perhaps related to the agricultural use of the area. Notwithstanding this observation, it is clear that materials related to the prehistoric use of the area are present in the lower sedimentary unit, although they are sparsely distributed.

Table 6. Recovered Materials from Site 3PP259.

FLAKES

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
ST 02	20-30	4	cht	-	a	a	
ST 02	30-40	1	cht	-	a	a	
ST 05	00-20	2	cht	-	a	a	
ST 05	00-20	1	cht	-	a	ps	
ST 05	10-20	1	cht	-	a	a	
ST 05	10-20	2	cht	-	a	ps	
ST 05	10-20	1	cht	-	pf	a	
ST 05	10-20	2	nov	-	a	a	
ST 05	10-20	1	qtz	-	pf	ps	
ST 05	20-30	7	cht	-	a	a	
ST 05	20-30	1	cht	-	a	a	heat treated
ST 05	20-30	1	cht	-	a	ps	
ST 05	20-30	1	cht	-	ps	ps	
ST 05	30-40	5	cht	-	a	a	
ST 05	40-50	1	q/s	-	a	p	
ST 05	40-50	1	q/s	-	a	p	groundstone fragment?
ST 05, Flotation	20-40	1	cht	-	a	ps	
Test Unit 4	30-40	2	cht	-	a	a	

TOOLS

Provenience	Depth	Material	Cortex	HF	Description
ST 05	00-10	qtz/sst	p	a	metate?, broken
ST 05	00-10	qtz/sst	p	a	mano broken
ST 05	00-10	qtz/sst	p	a	mano fragment?
ST 05	00-10	qtz/sst	p	a	mano fragment
ST 05	00-10	und	p	a	unidentified groundstone
ST 05	00-20	nov	a	a	preform
ST 05	00-20	qtz/sst	p	a	hoe?
ST 05	00-20	qtz/sst	p	a	mano with use wear
ST 05	00-20	qtz/sst	p	a	mano fragment
ST 05	00-20	qtz/sst	p	a	complete mano
ST 05	10-20	cht	ps	a	modified flake, utilized
ST 05	10-20	qtz/sst	p	a	unidentified groundstone fragment
ST 05	10-20	qtz/sst	p	a	hammerstone?

Table 6. Recovered Materials from Site 3PP259.
(continued)

TOOLS (cont'd)

Provenience	Depth	Material	Cortex	HF	Description
ST 05	20-30	qtz	p	a	mano
ST 05	20-30	qtz/sst	p	a	hammerstone, broken
ST 05	20-30	qtz/sst	p	a	milling stone
ST 05	20-30	qtz/sst	p	a	mano fragment
ST 05	30-40	cht	a	a	und biface fragment
Test Unit 1	50-60	qtz/sst	p	a	unidentified groundstone/ mano?
Test Unit 3	00-40	qtz/sst	p	a	mano, broken
Test Unit 4	00-20	qtz/sst	p	a	mano/hammerstone
Test Unit 4	00-20	qtz/sst	p	a	broken mano/cobble
Test Unit 4	00-20	qtz/sst	p	a	complete mano

PREHISTORIC CERAMICS

Provenience	Depth	Temper	Description
ST 05, Flotation	30-40	sand	body sherd, gray-black int/ext

Summary

Investigations indicated a sparse collection of prehistoric materials related to a buried sedimentary unit at this site. The presence of ceramics suggest an occupation within the 1,000 - 2,000 B.P. period. The concentration of ground stone items and the general lack of debris from chipped stone tool manufacture raise the possibility that this was an area used for the harvesting and/or processing of plant remains. It is tempting to interpret the few scattered chenopod seeds in Test Unit 1 as part of this activity. However, as intriguing as this possibility is, we do not regard the findings to date to be conclusive in this regard.

Site 3PP262

Original Observations

Site 3PP262 is located on the eastern side of Illinois Bayou on the landform designated as Tributary Fan (Smith 1986). The site is located in a vacant lot surrounded by residential houses. It is covered in bermuda grass (Figure 46).

At the time of discovery this site was described as a rather small site (50 x 70m) with subsurface deposits to 50cm. Seven of the 18 shovel tests placed in the site area contained cultural materials. Recovered materials included four flakes as well as shell- and clay-tempered ceramics (Bennett et al. 1986: 113, II-99).



Figure 46. Site 3PP262. View to the north.

Field Strategy and Techniques

Site investigations included the extraction of several soil cores, the excavation of a number of screened shovel tests (50 x 50cm), and the excavation of two Test Units (Figure 47). The Test Units were opened in an attempt to gain a broader exposure of the buried midden deposit. Test Unit 1 measured 1 x 2m; Test Unit 2 measured 3 x 3m. The upper 5cm of these tests which consisted of a thick mass of bermuda grass roots was removed without screening and replaced as sod. Excavation below this was done in 10cm units and the soil was screened through 1/4-inch hardware cloth. No clear indication of features was discovered.

Thirteen matrix samples were subjected to water separation and four soil samples were taken from the midden for chemical and textural analyses.

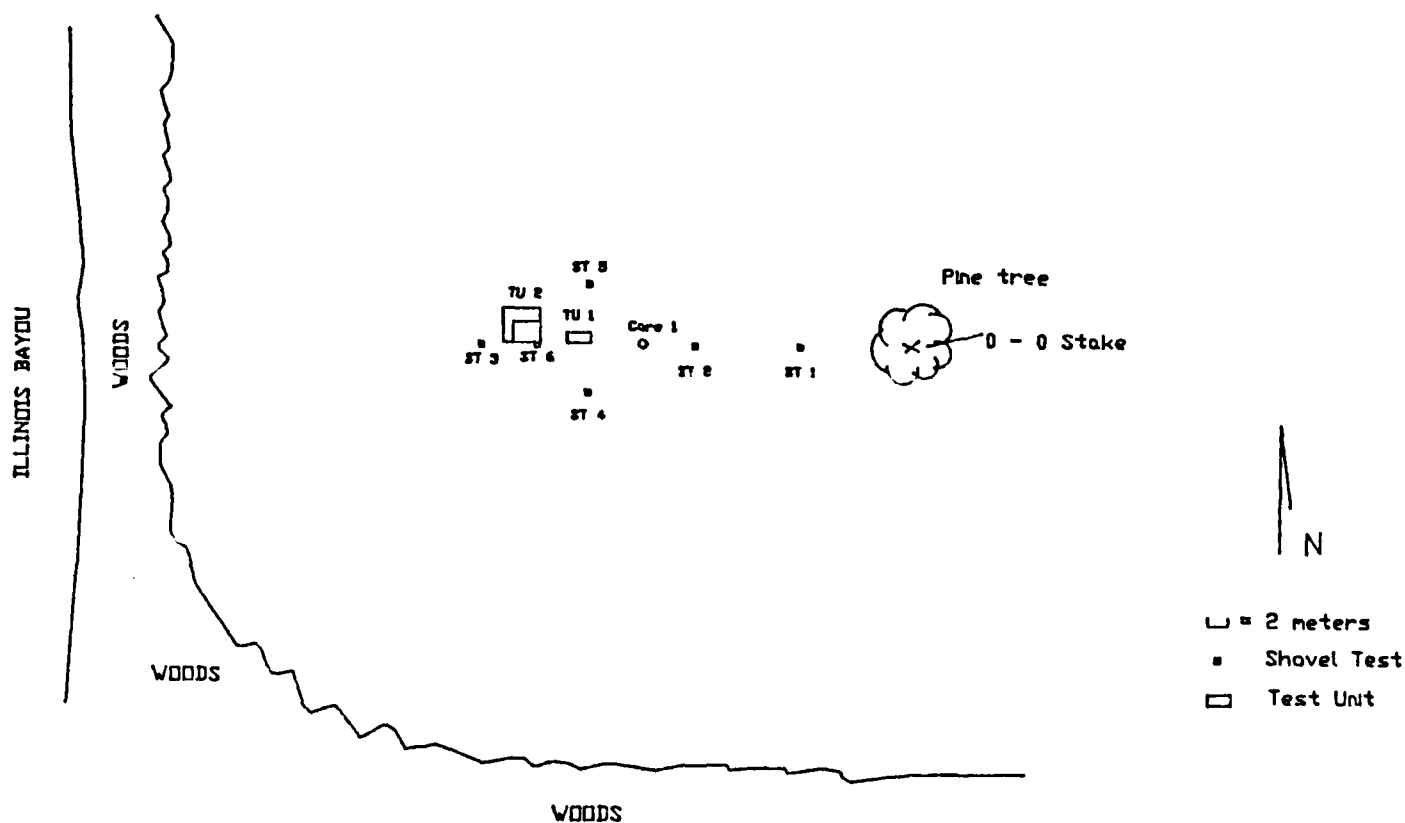


Figure 47. Sketch Map of 3PP262.

Stratigraphy

The stratigraphy at the site as indicated in the soil cores and hand excavations indicated the presence of a shallow-buried anthropic horizon (midden) at depths ranging across the site from 30 to 40cm. This surface formed the upper portion of a shallow fine sandy loam sedimentary unit with distinct but weak soil development. This unit, as shown in Core 1 (Figure 48), covered another distinct deposit encountered at about 1m in depth from the contemporary surface. As observed at the bottom of Core 1 this unit also exhibited rather weak soil development.

Excavations within the shovel tests and test units revealed the midden to be present across the site area. The upper portions of this deposit, however, had been mixed with the overlying materials through plowing. Plow scars were clearly visible in the level floor of Test Unit 2. The lower portion of this deposit seemed to have escaped this damage.

Four soil samples were taken from what was judged to be the midden deposits at 3PP262 for chemical and textural analysis.

Table 7. 3PP262: Soil Chemistry and Texture

Location	% Sand	% Silt	% Clay	pH	% Organic
TU 1, 35-45cm	75	15	10	5.5	0.4
ST 3, 25-35cm	76	15	9	5.6	0.4
TU 2, 20-30cm	76	15	9	5.5	0.4
ST 6, 35-45cm	75	16	9	5.4	0.4

The phosphorus levels (P1 - which measures the amount of readily available phosphorus in the soil) varied between 20 to 28 parts per million which is rated high for agricultural soils. The strong bray (P2) which determines the amount of readily available phosphorus plus a part of the active reserve phosphorus in the soil measured from 22 to 29 parts per million which is rated medium for agricultural soils. These readings could quite easily be natural for this soil.

Recovered Materials

Materials recovered from 3PP262 include lithic debris, lithic artifacts, ceramic sherds, and a single historic artifact (a fragment of frosted glass) (Table 8).

A total of 233 flakes were recovered. Of these 126 were chert, 74 were thought to be novaculite, and 33 were siltstone or quartzite.

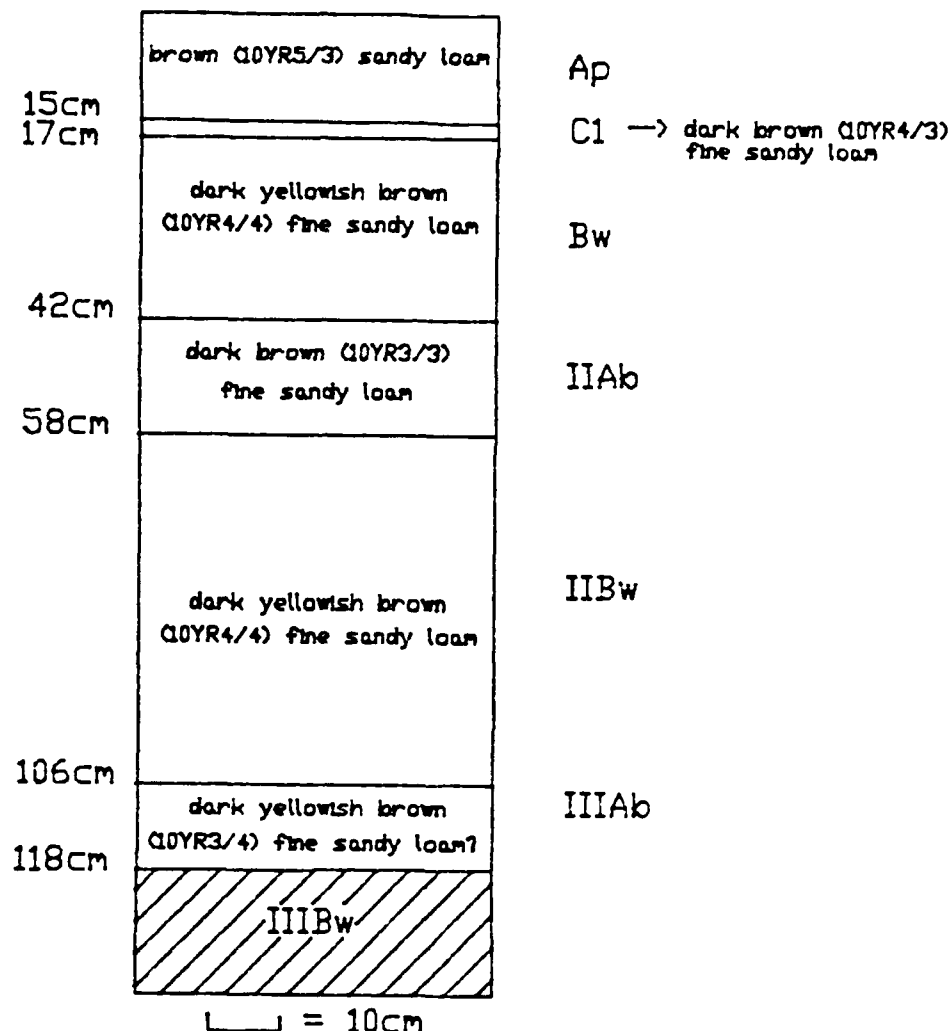


Figure 48. 3PP262: Soil Profile from Core 1.

The great majority of lithic tools were ground stone implements and fragments. A single stemmed arrow point was the only lithic tool which could be considered culturally diagnostic. Of the other two bifacial items, one is most likely an arrow point tip and the other could well be an aborted arrow point preform. Six flakes were recovered which we believe were modified by use.

The ceramics were predominantly plain, sand-tempered body sherds. One sherd exhibited a punctated decoration along the rim. No shell-tempered ceramics were identified.

Thirteen matrix samples were processed from 3PP262. Only two contained archeologically relevant materials. Charred hickory nut shells were recovered from the 10-20cm level of Test Unit 2 and the 35-45cm level of Test Unit 1. Unidentified bits of charred bone were also recovered.

Table 8. Recovered Materials from Site 3PP262.

FLAKES

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
ST 01	15-25	1	c/n	-	a	a	
	15-25	2	nov	-	a	a	
	15-25	1	nov	-	a	a	heat treated
	25-35	1	cht	-	a	a	
	25-35	1	cht	-	a	ps	
	35-45	1	cht	-	a	a	
	35-45	1	cht	-	a	ps	
	35-45	1	nov	-	a	a	
	35-45	1	nov	-	a	ps	
	45-55	1	cht	-	a	a	
	55-65	1	nov	-	a	a	
ST 02	15-25	1	cht	-	a	a	
	15-25	1	nov	-	a	a	
ST 03	05-15	1	c/n	-	a	a	heat treated
	05-15	1	cht	-	a	a	
	05-15	1	cht	-	a	ps	
	05-15	2	nov	-	a	a	
	35-45	1	c/n	-	a	a	
	45-55	1	cht	-	a	a	heat treated, heat spalls
ST 04	05-15	1	cht	-	a	a	
	25-35	1	nov	-	a	a	
ST 05	05-15	1	nov	-	a	ps	
	05-15	1	qtz	-	a	p	
	15-25	1	cht	-	a	a	
	15-25	1	nov	-	a	a	
	15-25	1	qtz	-	a	a	
	15-25	1	qtz	-	a	p	
	25-35	1	nov	-	a	a	
	35-45	1	cht	-	a	a	
	35-45	1	nov	-	a	a	
ST 06	05-15	1	cht	-	a	ps	
	15-25	3	cht	-	a	a	
	15-25	1	cht	-	a	ps	
	15-25	3	nov	-	a	a	
	15-25	1	nov	-	a	ps	

Table 8. Recovered Materials from Site 3PP262.
(continued)

FLAKES (cont'd)

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
ST 06	15-25	1	q/s	-	a	p	
	25-35	3	cht	-	a	a	
	25-35	2	cht	-	a	ps	
	25-35	1	qtz	-	a	a	
Test Unit 1	05-15	2	cht	-	a	ps	
	05-15	2	nov	-	a	ps	
	05-15	1	qtz	-	a	p	
	15-25	1	c/n	-	a	a	
	15-25	3	cht	-	a	a	
	15-25	1	cht	-	a	a	heat treated, heat spalls
	15-25	2	cht	-	a	p	
	15-25	1	cht	-	a	ps	
	15-25	11	nov	-	a	a	
	15-25	4	nov	-	a	ps	
	15-25	1	nov	-	pf	a	
	25-35	2	c/n	-	a	a	
	25-35	1	c/n	-	a	ps	
	25-35	7	cht	-	a	a	
	25-35	1	cht	-	a	a	heat treated, heat spalls
	25-35	2	cht	-	a	ps	
	25-35	7	nov	-	a	a	
	25-35	2	nov	-	a	ps	
	25-35	2	nov	-	pf	a	
	35-45	1	c/n	-	pf	ps	
	35-45	9	cht	-	a	a	
	35-45	1	cht	-	a	a	heat spalls
	35-45	1	cht	-	a	ps	
	35-45	7	nov	-	a	a	
	35-45	1	nov	-	a	ps	
	35-45	1	qtz	-	a	a	
	35-45	1	und	-	a	a	
Test Unit 2	10-20	3	c/n	-	a	a	
	10-20	12	cht	-	a	a	
	10-20	6	cht	-	a	ps	
	10-20	2	nov	-	a	ps	
	10-20	1	qtz	-	a	a	
	10-20	2	und	-	a	a	
	20-30	2	c/n	-	a	p	
	20-30	1	cht	-	a	a	

Table 8. Recovered Materials from Site 3PP262.
(continued)

FLAKES (cont'd)

Provenience	Depth	Number	Material	Size	Platform	Cortex	Notes
Test Unit 2	20-30	3	cht	-	a	p	
	20-30	7	cht	-	a	ps	
	20-30	1	cht	-	pf	a	
	20-30	5	nov	-	a	a	
	20-30	1	nov	-	pf	a	
	20-30	1	qz	-	a	a	mod.?
	30-40	12	cht	-	a	a	
Test Unit 2	30-40	1	cht	-	a	a	heat spalls
	30-40	2	cht	-	a	p	
	30-40	8	cht	-	a	ps	
	30-40	1	cht	-	pf	a	
	30-40	1	nov	-	a	a	
	30-40	1	qtz	-	a	a	
	30-40	2	und	-	a	a	
	40-50	3	c/n	-	a	a	
	40-50	14	cht	-	a	a	
	40-50	5	cht	-	a	ps	
	40-50	1	cht	-	pf	a	
	40-50	9	nov	-	a	a	
	40-50	1	nov	-	a	ps	
	40-50	1	qtz	-	a	a	
	40-50	1	und	-	a	a	

TOOLS

Provenience	Depth	Material	Cortex	HF	Description
ST 01	55-65	qtz/sst	p	a	unidentified groundstone, broken
	55-65	qtz/sst	p	a	metate, broken
ST 02	25-35	qtz/sst	p	a	nutting stone?
ST 03	05-15	qtz/sst	p	a	unidentified groundstone, broken
	05-15	qtz/sst	p	p	mano fragment
	15-25	qtz/sst	p	a	unidentified groundstone, broken
ST 04	25-35	qtz/sst	p	a	mano fragment
ST 05	25-35	qtz/sst	p	a	unidentified groundstone

Table 8. Recovered Materials from Site 3PP262.
(continued)

TOOLS

Provenience	Depth	Material	Cortex	HF	Description
ST 06	15-25	c/n	ps	a	modified flake, utilized
	15-25	qtz/sst	p	a	unidentified groundstone, broken
Test Unit 1	35-45	qtz/sst	p	a	unidentified groundstone
	05-15	cht	a	a	modified flake, utilized
	05-15	qtz/sst	p	a	unidentified groundstone, broken
	15-25	qtz/sst	p	a	metate fragment
	15-25	qtz/sst	p	a	unidentified groundstone fragment
	15-25	qtz/sst	p	a	groundstone, broken
	25-35	cht	a	a	unidentified biface fragment
Test Unit 2	10-20	cht	a	a	modified flake, utilized
	10-20	qtz/sst	p	a	unidentified groundstone fragment
	10-20	qtz/sst	p	a	unidentified groundstone/ mano
	20-30	qtz/sst	p	a	unidentified groundstone
	20-30	qtz/sst	p	a	mano fragment
	20-30	qtz/sst	p	a	mano fragment
	20-30	qtz/sst	p	a	mano fragment
	40-50	cht	a	a	modified flake, utilized
	40-50	cht	a	a	modified flake, utilized
	40-50	cht	a	a	unidentified arrow point
	40-50	nov	a	a	unidentified biface, broken
	40-50	nov	a	a	modified flake, utilized
	40-50	qtz/sst	p	a	unidentified groundstone fragment
	40-50	qtz/sst	p	a	mano fragment
	40-50	qtz/sst	p	a	mano fragment
	40-50	qtz/sst	p	a	groundstone fragment
	40-50	qtz/sst	p	a	unidentified groundstone, utilized
	40-50	qtz/sst	p	a	unidentified groundstone fragment
	40-50	qtz/sst	p	a	unidentified groundstone fragment
	40-50	qtz/sst	p	a	groundstone, broken
	40-50	qtz/sst	p	a	mano fragment

Table 8. Recovered Materials from Site 3PP262.
(continued)

PREHISTORIC CERAMICS

Provenience	Depth	Temper	Description
Shovel Test 3	05-15	sand	body sherd, red-brown int/ext
	05-15	sand	body sherd, red-brown int/ext
	15-25	sand	rim sherd, gray-black int/ext, red slip
Shovel Test 5	35-45	sand	body sherd, black int/brown ext
	35-45	sand	body sherd, black int/brown ext
Test Unit 1	05-15	sand	thin body sherd, black int/ext
	25-35	silt/sand	body sherd, black ext/red-brown int
	25-35	silt/sand	body sherd, black int/ext
	25-35	silt/sand	body sherd, black int/ext
	25-35	silt/sand	body sherd, black int/ext
	25-35	silt/sand	body sherd, black int/ext
Test Unit 2	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/brown ext
	30-40	sand	rim sherd, punctate decor. along rim
	30-40	sand	body sherd, black int/red-brown ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	30-40	sand	body sherd, black int/ext
	40-50	sand	body sherd, black int/red-brown ext
	40-50	sand	body sherd, brown clay
	40-50	sand	body sherd, black int/brown ext
	40-50	sand	body sherd, red-brown int/black ext
	40-50	sand	body sherd, brown clay
	40-50	sand	body sherd, black int/red-brown ext
	40-50	sand	body sherd, black int/brown ext
	40-50	sand	body sherd, brown clay
	40-50	sand	body sherd, black int/red-brown ext
	40-50	sand	body sherd, black int/ext
	40-50	sand	body sherd, black int/red-brown ext
	40-50	sand	body sherd, black int/brown ext
	40-50	sand	body sherd, black-brown int/ext

Table 8. Recovered Materials from Site 3PP262.
(continued)

PREHISTORIC CERAMICS (cont'd)

Provenience	Depth	Temper	Description
Test Unit 2 (cont'd)	40-50	sand	body sherd, black-brown int/ext
	40-50	sand	body sherd, black int/brown ext
	40-50	sand	body sherd, brown int/ext
	40-50	sand	body sherd, red-brown int/ext
	40-50	sand	body sherd, black-brown int/ext
	40-50	sand	body sherd, red-brown int/ext
	40-50	sand	body sherd, black int/red-brown ext
	40-50	sand	body sherd, black int/red-brown ext
	40-50	sand	body sherd, black int/red-brown ext
	40-50	sand	body sherd, red-brown int/ext

HISTORIC ARTIFACTS

Provenience	Depth	Description
Test Unit 2	30-40	frosted glass fragment

MISCELLANEOUS ARTIFACTS

Provenience	Depth	Description
Shovel Test 2	35-45	burned wood fragment
Test Unit 1	25-35	unidentified canine bone fragment

Summary

Test excavations at 3PP262 indicate the presence of the remains of a midden deposit which has been partially protected from recent mechanical disturbances by a layer of alluvium. Materials recovered from this midden suggest that it was created by occupation from about 1,000 to 2,000 years ago. The remains are thus quite likely to represent a single component occupation at this site.

SUMMARY AND CONCLUSIONS

Site Summaries

Investigations at 3PP255, 3PP258, 3PP259, and 3PP262 yielded information about the archeological record at each location.

Investigations at 3PP255 indicate that it consists of a rather sparse scatter of lithic debris. Materials are restricted to the upper portions (30cm or so) of the site. The areal extent of the artifact scatter is approximately 40m by 60m as originally estimated. Recovered materials were judged to be from the manufacture (and maintenance?) of bifacial tools and, perhaps, the processing of floral materials. No materials diagnostic of specific cultural periods were discovered.

Stratigraphic observations made at 3PP258 revealed at least three sedimentary units. The uppermost, which was devoid of cultural materials where examined, was judged to be of very recent origin. The middle unit contained numerous prehistoric materials as did the A horizon of the lower unit. Some mixing of materials was apparent, although it seems likely that the archeological record of the middle and, perhaps, the lower sedimentary units contain relatively unmixed materials from a late prehistoric use of the area.

Investigations at 3PP259 indicated a sparse collection of prehistoric materials related to a buried sedimentary unit at this site. The presence of ceramics suggest an occupation within the 1,000 - 2,000 B.P. period. The concentration of ground stone items and the general lack of debris from chipped stone tool manufacture raise the possibility that this was an area used for the harvesting and/or processing of plant remains. It is tempting to interpret the few scattered chenopod seeds in Test Unit 1 as part of this activity. However, as intriguing as this possibility is, we do not regard the findings to date to be conclusive in this regard.

Test excavations at 3PP262 indicate the presence of the remains of a midden deposit which has been partially protected from recent mechanical disturbances by a layer of alluvium. Materials recovered from this midden suggest that it was created by occupation from about 1,000 to 2,000 years ago. The remains are thus quite likely to represent a single component occupation at this site.

Site Assessment and Recommendations

It is our judgment that the ability of site 3PP255 to yield further information about the prehistoric occupation and use of this region has been largely exhausted. On this basis 3PP255 is not thought eligible for nomination to the National Register of Historic Places and no further archeological investigations are recommended for this site.

While the archeological record as contained in the artifacts recovered from sites 3PP258 and 3PP259 is sparse, it is our judgment that these sites may retain further potential for yielding more information regarding the prehistoric occupation and use of the area. The stratigraphic record at these sites indicate that these are quite likely single component sites which have been protected in some measure from subsequent damage by alluvial deposits. Further, if these sites were created by the procurement and processing of plant materials by Woodland and/or early Mississippian peoples, additional investigations may yield significant data regarding the subsistence practices of the pre-agricultural periods. Since the use of cultivated or encouraged plant resources in the period from about 1,000 to 2,000 years ago is an important regional issue it is our judgement that, even given the sparse remains here, that the sites should be considered significant.

Because of the complex stratigraphic record on this portion of the Tributary Fan where 3PP258 and 3PP259 are located, we would strongly recommend that data recovery efforts for these sites be coupled with a systematic stratigraphic investigation of the landform. Such investigations should enable researchers to reconstruct the series of events (and perhaps chronology) of the associated archeological record with the development of this landform and thus yield information regarding the human adaptation to this portion of Illinois Bayou.

The archeological record at 3PP262, while clearly damaged in the upper portion of the midden, is thought likely to have been created by an occupation which may be very restricted in time. It is our judgment that further investigations at this site designed to recover data from the lower portion of the midden area is quite likely to yield information regarding the chronology, subsistence, and ceramic technology of this occupation. On this basis, we regard 3PP262 to be potentially eligible for nomination to the National Register of Historic Places.

REFERENCES CITED

Bartlett, Charles S.

- 1963 The Tom's Brook Site -- 3J01: A Preliminary Report. In Arkansas Archeology 1962, edited by C. R. McGimsey III, pp. 15-65. Arkansas Archeological Society, Fayetteville

Bennett, W. J., Jr., Anne Frances Gettys, Aubra Lee, Lawson Smith, and Beverly Watkins

- 1986 Archeology in the Arkansas River Valley: A Cultural Resources Survey in the Central Arkansas River Valley, Lake Dardanelle and Ozark Lake, Arkansas. Archeological Assessments Report No. 47. Nashville, Arkansas.

Bennett, W. J., Jr., and Beverly Watkins

- 1987 Culture Historical Context: The Regional Record. Fort Chaffee Cultural Resource Studies No. 2. Archeological Assessments Report No. 74. Submitted to the U. S. Army Engineer District, Little Rock

Bond, Clell L.

- 1977 Spinach Patch Site and the River Bank Site. In Ozark Reservoir Papers: Archeology in West-Central Arkansas, 1965-1970, by M. P. Hoffman, N. E. Myer, D. Printup, and C. L. Bond, pp. 81-137. Arkansas Archeological Survey, Research Series No. 10. Fayetteville

Caldwell, Warren W.

- 1958 Archeological Investigations in the Dardanelle Reservoir, West-Central Arkansas. Submitted to the Smithsonian Institution, River Basin Surveys, Washington, D. C. [On file with the Arkansas Archeological Survey, Fayetteville]

Clancy, Phyllis M.

- 1985 The Carden Bottom's Puzzle Elucidated. Master's Thesis, Department of Anthropology, University of Arkansas, Fayetteville

Davis, Hester A.

- 1967 Paleo-Indian in Arkansas. The Arkansas Archeologist 8(1):1-3
- 1982 (editor) A State Plan for the Conservation of Archeological Resources in Arkansas. Arkansas Archeological Survey, Research Series No. 21. Fayetteville

Greengo, Robert E.

- 1957 Appraisal of the Archeological Resources of the Dardanelle Reservoir, Arkansas. Submitted to the Smithsonian Institution, River Basin Surveys, Washington, D. C. [On file with the Arkansas Archeological Survey, Fayetteville]

Harden, Patrick L., F. W. Bachuber, D. A. Baerreis, J. L. Gentry, F. C. Leonhardy, R. Marrinan, and C. L. Rohrbaugh

- 1981 Excavations at Sliding Slab Shelter: Hunting and Gathering in the Ouachitas. Environmental Assessments, Inc. Submitted to the U. S. Department of the Interior, Heritage Conservation and Recreation Service, Interagency Archaeological Services, Atlanta

Harrington, Mark R.

- 1924 A Pot-Hunter's Paradise. Museum of the American Indian, Indian Notes 1:84-90

Heartfield, Larraine, Michael R. Madden, and G. R. Dennis Price

- 1985 Results of Data Recovery Programs Implemented at 3J0089 and 3PP105 Archeological Sites Along the Ozark Gas Transmission System Pipeline, Johnson and Pope Counties Arkansas. Heartfield, Price, and Greene, Inc. Submitted to the U. S. Army Engineer District, Little Rock

Hoffman, Michael

- 1977a Aerial Photography over Ozark Reservoir. In Ozark Reservoir Papers: Archeology in West-Central Arkansas, 1965-1970, by M. P. Hoffman, N. E. Myer, D. Printup, and C. L. Bond, pp. 75-80. Arkansas Archeological Survey, Research Series No. 10. Fayetteville.

- 1977b An Archeological Survey of the Ozark Reservoir in West-Central Arkansas. In Ozark Reservoir Papers: Archeology in West-Central Arkansas, 1965-1970, by M. P. Hoffman, N. E. Myer, D. Printup, and C. L. Bond, pp. 1-44. Arkansas Archeological Survey, Research Series No. 10. Fayetteville.

- 1977c Controlled Surface Collection in Five Ozark Reservoir Sites. In Ozark Reservoir Papers: Archeology in West-Central Arkansas, 1965-1970, by M. P. Hoffman, N. E. Myer, D. Printup, and C. L. Bond, pp. 61-70. Arkansas Archeological Survey, Research Series No. 10. Fayetteville.

- 1985 The Terminal Mississippian Period in the Arkansas River Valley and Quapaw Ethnogenesis. Paper presented at the 1985 Mississippian in the Memphis Area Symposium, Memphis State University, Memphis

House, John H.

- 1972 Preliminary Reconnaissance of the Mulberry Creek Basin. Ms. submitted to the Arkansas Archeological Survey, Fayetteville.

Kay, Marvin (editor)

- 1982 Holocene Adaptations within the Lower Pomme de Terre River Valley, Missouri, Volumes I-III. Illinois State Museum Society. Submitted to the U. S. Army Engineer District, Kansas City

Moorehead, Warren K.

- 1931 Archeology of the Arkansas River Valley. Yale University Press,
New Haven, Connecticut

Park, Hugh (editor)

- 1955 Reminiscences of the Indians by Cephas Washburn. Press Argus,
Van Buren, Arkansas.

Printup, Dan

- 1977 Experiments in Aerial Photography. In Ozark Reservoir Papers:
Archeology in West-Central Arkansas, 1965-1970, by M. P.
Hoffman, N. E. Myer, D. Printup, and C. L. Bond, pp. 71-73.
Arkansas Archeological Survey, Research Series No. 10.
Fayetteville.

Sabo, George, III, Ann M. Early, Barbara A. Burnett, James P. Harcourt,
Jerome C. Rose, and W. Frederick Limp

- 1986 Archeological Research, Synthesis, and Overview Study of the
Southwestern Division, U. S. Army Corps of Engineers. Ms on
file, Southwest Division of the U. S. Army Corps of Engineers,
Dallas, Texas, and the Arkansas Archeological Survey,
Fayetteville

Smith, Lawson

- 1986 Geomorphological Reconnaissance of the Lake Dardanelle and Ozark
Lake Project Areas, Arkansas River, Arkansas. Ms. on file, U.S.
Army Engineer District, Little Rock.

Taylor, Robert A., and Carol Spears

- 1987 Archeological Investigations at Two Proposed Drill Pad
Locations: Ozark Real Estate #4 and Ragon No. 2, Johnson and
Logan Counties, Arkansas. Draft report submitted to Energy
Leasing Services, Inc. Fort Smith, Arkansas